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ABSTRACT

This document contains the papers presented at a conference that addressed the paucity of research on the relationship between schooling and adolescent development. The first four papers with reaction/comment statements focus on the following topics: (1) distinguishing the appropriate responsibilities of schools to adolescent development; (2) identifying the ways secondary schools differ from other environments such as home, work, and peer groups; (3) assessing the effect of school organizational features (e.g., student and adult roles, reward structures, rule-making and -enforcing) on adolescent development; and (4) citing programs and curricula that positively influence adolescents. In addition, two general background papers are provided, including a brief summary of literature on adolescence and a description of secondary education studies currently in progress. An interpretive summary of the conference and a section on professional experiences and training of conference participants conclude this volume. (Author/HLM)

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ADOLESCENT DEVELOPMENT AND SECONDARY SCHOOLING

Conference Proceedings from the
Wisconsin Center for Education Research
Madison, WI, February 1982

Fred M. Newmann and Christine E. Sleeter
Editors

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*An Institute for the Study of
Diversity in Schooling*

The University of Wisconsin-Madison

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TABLE OF CONTENTS

Page

ACKNOWLEDGEMENTS v

CONFERENCE OVERVIEW 3
Fred M. Newmann, University of Wisconsin

NEW MAPS OF DEVELOPMENT: NEW VISIONS OF EDUCATION 7
Carol Gilligan, Harvard University

REACTION: BIASES IN THEORIES OF DEVELOPMENT 23
Robert Hogan, Johns Hopkins University

CONTEXTS FOR ADOLESCENT DEVELOPMENT: THE INTERACTION OF SCHOOL, HOME, PEER GROUP, AND WORKPLACE 31
Stephen F. Hamilton, Cornell University

REACTION: WHAT'S THE SPECIAL ROLE OF THE HIGH SCHOOL? 61
Everett P. Dulit, M.D., Albert Einstein College of Medicine

TO FACILITATE OR IMPEDE? THE IMPACT OF SELECTED ORGANIZATIONAL FEATURES OF SECONDARY SCHOOLS ON ADOLESCENT DEVELOPMENT 77
John R. Mergendoller, Far West Laboratory For Educational Research and Development

REACTION: ADDITIONAL CONSIDERATIONS ABOUT SCHOOL ORGANIZATION AND ADOLESCENT DEVELOPMENT 107
Mary Haywood Metz, University of Wisconsin

TABLE OF CONTENTS (continued)

Page

CURRICULA AND PROGRAMS IN SECONDARY SCHOOL WHICH POSITIVELY INFLUENCE ADOLESCENTS' DEVELOPMENT--WHERE THERE'S THE WILL, THERE'S A WAY 121

Ralph Mosher, Boston University

REACTION: CONTEXT AND BROADER CONCEPTIONS OF DEVELOPMENT 155

LeBaron C. Moseby, Jr., University of Texas

SECONDARY SCHOOLS, SOCIALIZATION, AND SOCIAL DEVELOPMENT DURING ADOLESCENCE 163

John P. Hill, Virginia Commonwealth University

RESEARCH IN THE 1980s ON SECONDARY EDUCATION: A REVIEW AND A PROJECTION 201

Christine E. Sleeter, University of Wisconsin

INTERPRETIVE SUMMARY OF THE CONFERENCE 233

Fred M. Newmann, University of Wisconsin

CONFERENCE PARTICIPANTS 251

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The conference reported here was sponsored by the Wisconsin Center for Education Research, under a grant from the National Institute of Education (No. NIE-G-81-0009). With some responsibility for finalizing the project, I have the privilege of expressing my personal thanks and the Center's gratitude to many people who contributed to the conference and worked to produce this publication. As fellow conference coordinator, Larry Weber handled the multitude of logistics, from securing the conference site to supervising the production of this document. An external planning committee helped to conceptualize the conference: Joseph Adelson, Eleanor Farrar, Joan Lipsitz, Ralph Mosher, and Sheldon White. A University of Wisconsin committee offered continuing counsel, especially with conference procedure: Alan Lockwood, Janice Patterson, Christine Sleeter, Calvin Stone, Marshall Smith, Gary Wehlage. The staff at the Yahara Center provided comfortable and efficient facilities. Diane Quayle managed correspondence, expenses, typing of manuscripts, and all other secretarial work. Christine Sleeter edited each of the papers and reactions published here. While all of us attempted to facilitate a productive conference, its ultimate impact will be known largely through the work of the individual participants (listed on p. 251) and the authors, who deserve special thanks for stimulating our dialogue: Carol Gilligan and Robert Hogan; Stephen Hamilton and Everett Dulit; John Mergendoller and Mary Metz; Ralph Mosher and LeBaron Moseby; Christine Sleeter and John Hill.

Fred M. Newmann
Madison, February, 1982

ADOLESCENT DEVELOPMENT AND SECONDARY SCHOOLING

Conference Proceedings

CONFERENCE OVERVIEW

Fred M. Newmann
University of Wisconsin

Common experience and research tells us that adolescents develop. That is, they seem to become progressively "better" in thinking, physical activity, social skills, caring for others, exercising judgment. In modern cultures young people spend much of their lives in secondary schools during the period when some of this development occurs. Popular statements of educational aims, along with philosophical and psychological analyses, suggest that the promotion of development itself should become a primary responsibility of schools. To what extent and in what ways does secondary schooling actually affect development in adolescents?

Scholarship on adolescence ranges from a dominant psychoanalytic framework with its emphasis on therapy for treating individual pathology to anthropological studies on transitions from childhood to adulthood in different cultures. The literature discusses development of thinking, the ego, moral reasoning, political attitudes, sexual behavior, but it rarely explores the relationship between these areas and secondary schools. Major research directed at the secondary school attempts to describe students' experiences in schools, key aspects of schooling that affect student achievement, and how schools change, but generally this body of research also fails to outline relationships between secondary schooling and adolescent development.

Purpose of the Conference

We called a conference to address the paucity of research on the connection between schooling and adolescent development. Intending to review the current state of knowledge on this topic, we hoped the conference might also create an agenda for future research and stimulate scholars to search more systematically for connections between adolescence and schooling. As a result of planning meetings in May, 1981, presentations on four topics were commissioned.

The persistent problem of defining human development, the presence of alternative conceptions, and the philosophic challenge of advocating development as an aim of formal education led to the first question:

1. What conceptions of adolescent development should serve as aims of education?

In considering which developmental goals ought to be pursued by schools, the appropriate responsibilities of schools should be distinguished from those of other environments such as family, peer group, workplace or church. The influence of these other educational contexts is widely acknowledged, but we have not understood their actual impact on adolescent development. The second question called for such analysis:

2. In what critical ways does the secondary school differ from other environments such as home, work, and peer group in its potential for influencing adolescent development?

From literature on hidden curriculum and the dynamics of organizations, we assume that much within school, other than formal curriculum, probably influences students (e.g., scheduling affects their sense of time, grading affects their concept of self, behaving in a passive role affects their initiative). Since previous analyses have not related organizational features to specific notions of adolescent development, question three asked:

3. How do organizational features of secondary schools (e.g., roles of students and adults, reward structure, rule-making and enforcing) affect adolescent development?

Finally, we examined the impact of specific school programs aimed at stimulating human development. Within the past fifteen years, programs have been mounted to enhance moral, cognitive, ego, and social development, and many programs have been evaluated. The fourth question requested a review and possible aggregation of these studies:

4. What programs and curricula in secondary schools can positively influence adolescent development?

In addition to presentations on the four main questions, we felt participants could benefit from two general background papers: a brief summary of literature on adolescence and a description of a number of studies of secondary education currently in progress.

Structure of the Conference

Due to the complexity of the topics, it seemed that the work of individual investigators might best be enhanced through intensive dialogue among co-workers from diverse perspectives. Using the presentations, reactions and background papers as starting points, the conference

was structured to promote that discussion. Thirty participants representing psychological, sociological, philosophical, and practical educational perspectives were invited to work on these topics for two and one-half days in November, 1981, and to concentrate on the task of recommending future research to illuminate further the connections between secondary schooling and adolescent development.

On the first day each paper was discussed in the large group for about 45 minutes, following a 20-minute summary by the presenter and a 20-minute response by the reactor. With participants assigned to topics of their choosing, the day concluded with small group meetings (about 8 people per group) on each topic, and these discussions continued on the second day. Each group was expected to submit a written report, and writing time was scheduled late in the second day. Oral reports from each group and discussion of their conclusions occupied the final morning.

Participants discussed the nature of adolescent socialization, the role of public schools, problems of particular approaches to research, and the exclusion of women, minorities, the handicapped from certain opportunities. Small groups each submitted a report containing written contributions from many participants. The reports, circulated to participants after the conference, contained helpful insights, although relatively few suggestions for future research studies. Following the conference, presenters and reactors had the opportunity to revise their work, but time and resources did not permit groups to polish their reports for publication. I have tried to incorporate their work in the interpretive summary that concludes this volume.

NEW MAPS OF DEVELOPMENT: NEW VISIONS OF EDUCATION

Carol Gilligan
Harvard University

That development is the aim of a liberal education seems clear until we begin to ask what is a liberal education and what constitutes development. The current spirit of reappraisal in the field of education stems in part from the fact that some old promises have failed and new practices must be found if the vision of education for freedom and for democracy is to be realized or sustained. But this current reappraisal in the field of education finds its parallel in the field of developmental psychology where a similar reassessment is taking place, a reassessment that began in the early 1970's when developmental psychologists began to question the adulthood that formerly they had taken for granted and when the exclusion of women from the research samples from which developmental theories were generated began to be noticed as a serious omission and one which pointed to the exclusion of other groups as well. Thus, if the changing population of students, particularly the larger number of adults and especially of adult women entering post-secondary education, has raised a series of questions about the aims of education and the nature of educational practice, the study of adulthood and of women has generated a new set of questions for theorists in human development.

This paper was presented, in an earlier version, to the National Academy of Education and revised for publication in the American Journal of Orthopsychiatry. It is reprinted here with permission from the American Journal of Orthopsychiatry: copyright, 1982, American Orthopsychiatric Association, Inc. The research was supported by grant RO3-MH31571 from the National Institute of Mental Health and grant G700131 from the National Institute of Education. Portions of this paper are contained in a full-length work, *In a Different Voice: Psychological Theory and Women's Development*, forthcoming from Harvard University Press in May, 1982. I wish to thank the children who participated in the research and Michael Murphy who collaborated in designing and carrying out this work.

To ask whether current developmental theories can be applied to understanding or assessing the lives of people who differ from those upon whose experience these theories were based is only to introduce a problem of far greater magnitude, the adequacy of current theories themselves. The answer to the initial question in one sense is clear, given the fact that these theories have repeatedly been used in assessing the development of different groups. But the question asked in such assessment is how much like the original group is the different group being assessed. For example, if the criteria for development are derived from studies of males and these criteria are then used to measure the development of females, the question being asked is how much like men do women develop. The assumption underlying this approach is that there is a universal standard of development and a single scale of measurement along which differences found can be aligned as higher and lower, better and worse. Yet, the initial exclusion of women displays the fallacy of this assumption and indicates a recognition of difference, pointing to the problem I wish to address. While I will use the experience of women to demonstrate how the group left out in the construction of theory calls attention to what is missing in its account, my interest lies not only in women and the perspective they add to the narrative of growth but also in the problem that differences pose for a liberal educational philosophy that strives toward an ideal of equality and for a developmental psychology that posits a universal and invariant sequence of growth. In joining the subjects of morality and women, I focus specifically on the questions of value inherent in education and in developmental psychology and indicate how the lives of women call into question current maps of development and inform a new vision of human growth.

The repeated marking of women's experience as, in Freud's (1926) terms, "a dark continent for psychology" raises a question as to what has shadowed the understanding of women's lives. Since women in fact do not live on a continent apart from men but instead repeatedly engage with them in the activities of everyday life, the mystery deepens and the suggestion emerges that theory may be blinding observation. While the disparity between women's experience and the representation of human development, noted throughout the psychological literature, has generally been seen to signify a problem in women's development, the failure of women to fit existing models of human growth may point to a problem in the representation, a limitation in the conception of the human condition, an omission of certain truths about life. The nature of these truths and their implications for understanding development and thinking about education are the subjects I wish to address.

Construction of Relationships and the Concept of Morality

Evidence of sex differences in the findings of psychological research comes mainly from studies that reveal the way in which men and women construct the relation between self and others. While the differences observed in women's experience and understanding of relationships have posed a problem of interpretation that recurs throughout

the literature on psychoanalysis and personality psychology, this problem emerges with particular clarity in the field of moral judgment research. Since moral judgments pertain to conflicts in the relation of self to others, a difference in the construction of that relationship would lead to a difference in the conception of the moral domain. This difference would be manifest in the way moral problems are seen, in the questions asked which serve to guide the judgment and resolution of moral dilemmas. While the failure to perceive this difference has led psychologists to apply constructs derived from research on men to the interpretation of women's experience and thought, the recognition of this difference points to the limitation of this approach. If women's moral judgments reflect a different understanding of social relationships, then they may point to a line of social development whose presence in both sexes is currently obscured.

Theories and Moral Development

This discussion of moral development takes place against the background of a field where beginning with Freud's theory that tied superego formation to castration anxiety, extending through Piaget's study of boys' conceptions of the rules of their games, and culminating in Kohlberg's derivation of six stages of moral development from research on adolescent males, the line of development has been shaped by the pattern of male experience and thought. The continual reliance on male experience to build the model of moral growth has been coupled with a continuity in the conception of morality itself. Freud's (1929) observation that "the first requisite of civilization is justice, the assurance that a rule once made will not be broken in favour of an individual," extends through Piaget's (1932) conception of morality as consisting in respect for rules and into Kohlberg's (1981) claim that justice is the most adequate of moral ideals. The imagery that runs through this equation of morality with justice depicts a world comprised of separate individuals whose claims fundamentally conflict but who find in morality a mode of regulating conflict by agreement that allows the development of life lived in common.

The notion that moral development witnesses the replacement of the rule of brute force with the rule of law, bringing isolated and endangered individuals into a tempered connection with one another, then leads to the observation that women, less aggressive and thus less preoccupied with rules, are as a result less morally developed. The recurrent observations of sex differences that mark the literature on moral development are striking not only in their concurrence but in their reiterative elaboration of a single theme. Whether expressed in the general statement that women show less sense of justice than men (Freud, 1925) or in the particular notation that girls, in contrast to boys, think it better to give back fewer blows than one has received (Piaget, 1932), the direction of these differences is always the same, pointing in women to a greater sense of connection, a concern with relationships more than with rules. But this observation then yields to the paradoxical con-

clusion that women's preoccupation with relationships constitutes an impediment to their moral development.

The Moral Judgments of Two Eleven-Year-Olds

To illustrate how a difference in the understanding of relationships leads to a difference in the conceptions of morality and of self, I begin with the moral judgments of two eleven-year-old children, a boy and a girl who see in the same dilemma two very different moral problems. Demonstrating how brightly current theory illuminates the line and the logic of the boy's thought while casting scant light on that of the girl, I will show how the girl's judgments reflect a fundamentally different approach. I have chosen for the purposes of this discussion a girl whose moral judgments elude current categories of developmental assessment, in order to highlight the problem of interpretation rather than to exemplify sex differences per se. My aim is to show how by adding a new line of interpretation it becomes possible to see development where previously development was not discerned and to consider differences in the understanding of relationships without lining up these differences on a scale from better to worse.

The two children I consider--Amy and Jake--were in the same sixth grade class at school and participated in a study designed to explore different conceptions of morality and self. The sample selected for study was chosen to focus the variables of gender and age while maximizing developmental potential by holding constant, at a high level, the factors of intelligence, education and social class that have been associated with moral development, at least as measured by existing scales. The children in question were both bright and articulate and, at least in their eleven-year-old aspirations, resisted easy categories of sex-role stereotyping since Amy aspired to become a scientist while Jake preferred English to math. Yet their moral judgments seemed to students well versed in psychological theory to confirm familiar notions about differences between the sexes, suggesting that the edge girls have on moral development during the early school years gives way at puberty with the ascendance of formal logical thought in boys.

The dilemma these children were asked to resolve was one in the series devised by Kohlberg to measure moral development in adolescence by presenting a conflict between moral norms and exploring the logic of its resolution. In this particular dilemma, a man named Heinz considers whether or not to steal a drug which he cannot afford to buy in order to save the life of his wife. In the standard format of Kohlberg's interviewing procedure, the description of the dilemma itself--Heinz's predicament, the wife's disease, the druggist's refusal to lower his price--is followed by the question, should Heinz steal the drug? Then the reasons for and against stealing are explored through a series of further questions that vary and extend the parameters of the dilemma in a way designed to reveal the underlying structure of moral thought.

Jake, at eleven, is clear from the outset that Heinz should steal the drug. Constructing the dilemma as Kohlberg did as a conflict between the values of property and life, he discerns the logical priority of life and uses that logic to justify his choice.

> For one thing, a human life is worth more than money, and if the druggist only makes $1,000, he is still going to live, but if Heinz doesn't steal the drug, his wife is going to die. (*WHY IS LIFE WORTH MORE THAN MONEY?*) Because the druggist can get a thousand dollars later from rich people with cancer, but Heinz can't get his wife again. (*WHY NOT?*) Because people are all different, and so you couldn't get Heinz's wife again.

Asked if Heinz should steal the drug if he does not love his wife, Jake replies that he should, saying that not only is there "a difference between hating and killing," but also, if Heinz were caught, "the judge would probably think it was the right thing to do." Asked about the fact that in stealing, Heinz would be breaking the law, he says that "the laws have mistakes and you can't go writing up a law for everything that you can imagine."

Thus, while taking the law into account and recognizing its function in maintaining social order (the judge, he says, "should give Heinz the lighest possible sentence"), he also sees the law as man-made and therefore subject to error and change. Yet his judgment that Heinz should steal the drug, like his view of the law as having mistakes, rests on the assumption of agreement, a societal consensus around moral values that allows one to know and expect others to recognize what is "the right thing to do."

Fascinated by the power of logic, this eleven-year-old boy locates truth in math which, he says, is "the only thing that is totally logical." Considering the moral dilemma to be "sort of like a math problem with humans," he sets it up as an equation and proceeds to work out the solution. Since his solution is rationally derived, he assumes that anyone following reason would arrive at the same conclusion and thus that a judge would also consider stealing to be the right thing for Heinz to do. Yet he is also aware of the limits of logic; asked whether there is a right answer to moral problems, he says that "there can only be right and wrong in judgment," since the parameters of action are more variable and complex. Illustrating how actions undertaken with the best of intentions can eventuate in the most disastrous of consequences, he says, "like if you give an old lady your seat on the trolley, if you are in a trolley crash and that seat goes through the window, it might be that reason that the old lady dies."

Theories of developmental psychology illuminate well the position of this child, standing at the juncture of childhood and adolescence, at

what Piaget describes as the pinnacle of childhood intelligence, and beginning through thought to discover a wider universe of possibility. The moment of preadolescence is caught by the conjunction of formal operational thought with a description of self still anchored in the factual parameters of his childhood world, his age, his town, his father's occupation, the substance of his likes, dislikes, and beliefs. Yet as his self-description radiates the self-confidence of a child who has arrived, in Erikson's terms, at a favorable balance of industry over inferiority, competent, sure of himself, and knowing well the rules of the game, so his emergent capacity for formal thought, his ability to think about thinking and to reason things out in a logical way, frees him from dependence on authority and allows him to find solutions to problems by himself.

This emergent autonomy then charts the trajectory that Kohlberg's six stages of moral development trace, a three-level progression from an egocentric understanding of fairness based on individual need (stages one and two), to a conception of fairness anchored in the shared conventions of societal agreement (stages three and four), and finally to a principled understanding of fairness that rests on the free-standing logic of equality and reciprocity (stages five and six). While Jake's judgments at eleven are scored as conventional on Kohlberg's scale, a mixture of stages three and four, his ability to bring deductive logic to bear on the solution of moral dilemmas, to differentiate morality from law, and to see how laws can be considered to have mistakes, points toward the principled conception of justice that Kohlberg equates with moral maturity.

In contrast, Amy's response to the dilemma conveys a very different impression, an image of development stunted by a failure of logic, an inability to think for herself. Asked if Heinz should steal the drug, she replies in a way that seems evasive and unsure:

> Well, I don't think so. I think there might be other ways besides stealing it, like if he could borrow the money or make a loan or something, but he really shouldn't steal the drug, but his wife shouldn't die either.

Asked why he should not steal the drug, she considers neither property nor law but rather the effect that theft could have on the relationship between Heinz and his wife. If he stole the drug, she explains,

> he might save his wife then, but if he did, he might have to go to jail, and then his wife might get sicker again, and he couldn't get more of the drug, and it might not be good. So, they should really just talk it out and find some other way to make the money.

Seeing in the dilemma not a math problem with humans but a narrative of relationships that extends over time, she envisions the wife's

continuing need for her husband and the husband's continuing concern for his wife and seeks to respond to the druggist's need in a way that would sustain rather than sever connection. As she ties the wife's survival to the preservation of relationships, so she considers the value of her life in a context of relationships, saying that it would be wrong to let her die because, "if she died, it hurts a lot of people and it hurts her." Since her moral judgment is grounded in the belief that "if somebody has something that would keep somebody alive, then it's not right not to give it to them," she considers the problem in the dilemma to arise not from the druggist's assertion of rights but from his failure of response.

While the interviewer proceeds with the series of questions that follow from Kohlberg's construction of the dilemma, Amy's answers remain essentially unchanged, the various probes serving neither to elucidate nor to modify her initial response. Whether or not Heinz loves his wife, he still shouldn't steal or let her die; if it were a stranger dying instead, she says that "if the stranger didn't have anybody near or anyone she knew," then Heinz should try to save her life but he shouldn't steal the drug. But as the interviewer conveys through the repetition of questions that the answers she has given are not heard or not right, Amy's confidence begins to diminish and her replies become more constrained and unsure. Asked again why Heinz should not steal the drug, she simply repeats, "Because it's not right." Asked again to explain why, she states again that theft would not be a good solution, adding lamely, that, "if he took it, he might not know how to give it to his wife, and so his wife might still die." Failing to see the dilemma as a self-contained problem in moral logic, she does not discern the internal structure of its resolution; as she constructs the problem differently herself, Kohlberg's conception completely evades her.

Instead, seeing the world comprised of relationships rather than of people standing alone, a world that coheres through human connection rather than through systems of rules, she finds the puzzle in the dilemma to lie in the failure of the druggist to respond to the wife. Saying that "it is not right for someone to die when their life could be saved," she assumes that if the druggist were to see the consequences of his refusal to lower his price, he would realize that "he should just give it to the wife and then have the husband pay back the money later." Thus she considers the solution to the dilemma to lie in making the wife's condition more salient to the druggist or, that failing, in appealing to others who are in a position to help.

Just as Jake is confident the judge would agree that stealing is the right thing for Heinz to do, so Amy is confident that, "if Heinz and the druggist had talked it out long enough, they could reach something besides stealing." As he considers the law to "have mistakes," so she sees this drama as a mistake, believing that "the world should just share things more and then people wouldn't have to steal." Both children thus recognize the need for agreement but see it as mediated in different ways, he impersonally through systems of logic and law, she personally through

communication in relationship. As he relies on the conventions of logic to deduce the solution to this dilemma, assuming these conventions to be shared, so she relies on a process of communication, assuming connection and believing that her voice will be heard. Yet while his assumptions about agreement are confirmed by the convergence in logic between his answers and the questions posed, her assumptions are belied by the failure in communication, the interviewer's inability to understand her response.

Measuring Moral Development: Assessing Diverse Perceptions

While the frustration of the interview with Amy is apparent in the repetition of questions and its ultimate circularity, the problem of interpretation arises when it comes to assessing her response. Considered in the light of Kohlberg's conception of the stages and sequence of moral development, her moral judgments are a full stage lower in moral maturity than those of the boy. Scored as a mixture of stages two and three, they seem to reveal a feeling of powerlessness in the world, an inability to think systematically about the concepts of morality or law, a reluctance to challenge authority or to examine the logic of received moral truths, a failure even to conceive of acting directly to save a life or to consider that such action if taken could possibly have an effect. As her reliance on relationships seems to reveal a continuing dependence and vulnerability, so her belief in communication as the mode through which to resolve moral dilemmas appears naive and cognitively immature.

Yet her description of herself conveys a markedly different impression. Once again, the hallmarks of the preadolescent child depict a child secure in her sense of herself, confident in the substance of her beliefs, and sure of her ability to do something of value in the world. Describing herself at eleven as "growing and changing," Amy says that she "sees some things differently now, just because I know myself really well now, and I know a lot more about the world." But the world she knows is a different world from that refracted by Kohlberg's construction of Heinz's dilemma. Her world is a world of relationships and psychological truths where an awareness of the connection between people gives rise to a recognition of responsibility for one another, a perception of the need for response. Seen in this light, her view of morality as arising from the recognition of relationship, her belief in communication as the mode of conflict resolution, and her conviction that the solution to the dilemma will follow from its compelling representation seem far from naive or cognitively immature but rather to contain the insights central to an ethic of care, just as Jake's judgments reflect the logic of the justice approach. Her incipient awareness of the "method of truth," central to nonviolent conflict resolution, and her belief in the restorative activity of care, lead her to see the actors in the dilemma arrayed not as opponents in a contest of rights but as members of a network of relationships on whose continuation they all depend. Consequently her solution to the dilemma lies in activating the network by communication, securing the inclusion of the wife by strengthening rather than severing connections.

But the different logic of Amy's response calls attention to a problem in the interpretation of the interview itself. Conceived as an interrogation, it appears instead as a dialogue which takes on moral dimensions of its own, pertaining to the interviewer's uses of power and to the manifestations of respect. With this shift in the conception of the interview, it immediately becomes clear that the interviewer's problem in hearing Amy's response stems from the fact that Amy is answering a different question from the one the interviewer thought had been posed. Amy is considering not *whether* Heinz should act in this situation (*Should* Heinz steal the drug?) but rather *how* Heinz should act in response to his awareness of his wife's need (Should Heinz *steal* the drug?). The interviewer takes the mode of action for granted, presuming it to be a matter of fact. Amy assumes the necessity for action and considers what form it should take. In the interviewer's failure to imagine a response not dreamt of in Kohlberg's moral philosophy lies the failure to hear Amy's question and to see the logic in her response, to discern that what from one perspective appears to be an evasion of the dilemma signifies in other terms a recognition of the problem and a search for a more adequate solution.

Thus in Kohlberg's dilemma these two children see two very different moral problems--Jake a conflict between life and property that can be resolved by logical deduction, Amy a fracture of human relationship that must be mended with its own threat. Asking different questions that arise from different conceptions of the moral domain, they arrive at answers that fundamentally diverge, and the arrangement of these answers as successive stages on a scale of increasing moral maturity calibrated by the logic of the boy's response misses the different truth revealed in the judgment of the girl. To the question, What does he see that she does not? Kohlberg's theory provides a ready response, manifest in the scoring of his judgments a full stage higher than hers in moral maturity; to the question, What does she see that he does not? Kohlberg's theory has nothing to say. Since most of her responses fall through the sieve of Kohlberg's scoring system, her responses appear from his perspective to lie outside the moral domain.

Yet just as Jake reveals a sophisticated understanding of the logic of justification, so Amy is equally sophisticated in her understanding of the nature of choice. Saying that "if both the roads went in totally separate ways, if you pick one, you'll never know what would happen if you went the other way," she explains that "that's the chance you have to take, and like I said, it's just really a guess." To illustrate her point "in a simple way," she describes how, in choosing to spend the summer at camp, she

> will never know what would have happened if I had
> stayed here, and if something goes wrong at camp, I'll

> never know if I stayed here if it would have been better. There's really no way around it because there's no way you can do both at once, so you've got to decide, but you'll never know.

In this way, these two eleven-year-old children, both highly intelligent, though perceptive about life in different ways, display different modes of moral understanding, different ways of thinking about conflict and choice. Jake, in resolving the dilemma, follows the construction that Kohlberg has posed. Relying on theft to avoid confrontation and turning to the law to mediate the dispute, he transposes a hierarchy of power into a hierarchy of values by recasting a conflict between people into a conflict of claims. Thus abstracting the moral problem from the interpersonal situation, he finds in the logic of fairness an objective means of deciding who will win the dispute. But this hierarchical ordering, with its imagery of winning and losing and the potential for violence which it contains, gives way in Amy's construction of the dilemma to a network of connection, a network sustained by a process of communication. With this shift, the moral problem changes from one of unfair domination, the imposition of property over life, to one of unnecessary exclusion, the failure of the druggist to respond to the wife.

This shift in the formulation of the moral problem and the corresponding change in the imagery of relationships are illustrated as well by the responses of two eight-year-old children, asked to describe a situation in which they weren't sure what was the right thing to do:

> When I really want to go to my friends and my mother is cleaning the cellar, I think about my friends, and then I think about my mother, and then I think about the right thing to do. (*BUT HOW DO YOU KNOW IT'S THE RIGHT THING TO DO*?) Because some things go before other things.
>
> (Jeffrey, age 8)

> I have a lot of friends, and I can't always play with all of them, so everybody's going to have to take a turn, because they're all my friends. But like if someone's all alone, I'll play with them. (*WHAT KINDS OF THINGS DO YOU THINK ABOUT WHEN YOU ARE TRYING TO MAKE THAT DECISION*?) Um, someone all alone, loneliness.
>
> (Karen, age 8)

While Jeffrey sets up a hierarchical ordering in thinking about the conflict between desire and duty, Karen describes a network of relationships that includes all of her friends. Both children deal with the issues of exclusion and priority created by choice, but while Jeffrey thinks about what goes first, Karen focuses on who is left out.

Moral Judgment and Self-Descriptions

In illustrating a difference in children's thinking about moral con-

flict and choice, I have described two views that are complementary rather than sequential or opposed. In doing so, I go against the bias of developmental theory toward ordering differences in a hierarchical mode. This correspondence between the order of developmental theory and of the boy's responses contrasts with the disparity between the structure of theory and that manifest in the thought of the girl's. Yet, in neither comparison does one child's thought appear as precursor of the other's position. Thus, questions arise about the relation between these perspectives; what is the significance of these differences, and how do these two modes of thinking connect? To pursue these questions, I return to the eleven-year-olds and consider the way they describe themselves.

JAKE	*AMY*
	(HOW WOULD YOU DESCRIBE YOURSELF TO YOURSELF?)
Perfect. That's my conceited side. What do you want--any way that I choose to describe myself?	You mean my character? *(WHAT DO YOU THINK?)* Well, I don't know. I'd describe myself as, well, what do you mean?
	(IF YOU HAD TO DESCRIBE THE PERSON YOU ARE IN A WAY THAT YOU YOURSELF WOULD KNOW IT WAS YOU, WHAT WOULD YOU SAY?)
I'd start off with eleven years old. Jake [last name]. I'd have to add that I live in [town] because that is a big part of me, and also that my father is a doctor because I think that does change me a little bit, and that I don't believe in crime, except for when your name is Heinz--that I think school is boring because I think that kind of changes your character a little bit. I don't sort of know how to describe myself because I don't know how to read my personality.	Well, I'd say that I was someone who likes school and studying, and that's what I want to do with my life. I want to be some kind of a scientist or something, and I want to do things, and I want to help people. And I think that's what kind of person I am, or what kind of person I try to be. And that's probably how I'd describe myself. And I want to do something to help other people.
(IF YOU HAD TO DESCRIBE THE WAY YOU ACTUALLY WOULD DESCRIBE YOURSELF, WHAT WOULD YOU SAY?)	*(WHY IS THAT?)*
I like corny jokes. I don't really like to get down to work, but I can do all the	Well, because I think that this world has a lot of problems, and I think that

stuff in school. Every single problem that I have seen in school I have been able to do, except for ones that take knowledge, and after I do the reading, I have been able to do them, but sometimes I don't want to waste my time on easy homework. And also I'm crazy about sports. I think, unlike a lot of people, that the world still has hope . . . Most people that I know I like, and I have the good life, pretty much as good as any I have seen, and I am tall for my age.

everybody should try to help somebody else in some way, and the way I'm choosing is through science.

In the voice of the eleven-year-old boy, a familiar form of self-definition appears, resonating to the school-book inscription of the young Stephen Daedalus ("himself, his name and where he was" p. 15) and echoing the descriptions that appear in *Our Town*, laying out across the coordinates of time and space a hierarchical order in which to define one's place. Describing himself as distinct by locating his particular position in the world, Jake sets himself apart from that world by his abilities, his beliefs and his height. Although Amy also enumerates her likes, her wants, and her beliefs, she locates herself in relation to the world, describing herself through actions that bring her into connection with others, elaborating ties through her ability to provide help. To Jake's ideal of perfection against which he measures the worth of himself, Amy counterposes an ideal of care against which she measures the worth of her activity. While she places herself in relation to the world and chooses to help others through science, he places the world in relation to himself as it defines his character, his position, and the quality of life.

Implications for Developmental Theory and Educational Practice

As the voices of these children illuminate two modes of self-description and two modes of moral judgment, so they illustrate how readily we hear the voice that speaks of justice and of separation and the difficulty we encounter in listening to the voice that speaks of care and connection. Listening through developmental theories and through the structures of our educational and social system, we are attuned to a hierarchical ordering that represents development as a progress of separation, a chronicle of individual success. In contrast, the understanding of development as a progress of human relationships, a narrative of expanding connection is an unimagined representation. The image of network or web seems more

readily to connote entrapment than an alternative and nonhierarchical vision of human connection.

This central limitation in the representation of human development appears most clearly in recent portrayals of adult life where the insistent focus on self and on work provides scanty representation of an adulthood spent in the activities of relationship and care. The tendency to chart the unfamiliar waters of adult development with the familiar markers of adolescent separation and growth leads to an equation of development with separation and a failure to represent the reality of connection in the history of love and the interpersonal context of work. Levinson (1978), patterning the stages of adult development on the seasons of a man's life, defines the developmental process explicitly as one of individuation but reports an absence of friendships in men's lives. Vaillant (1977), deriving his description of adaptation to life from the lives of the men who took part in the Grant study, notes that the question these men found most difficult to answer was "can you describe your wife?". In this light, the observation that women's embeddedness in lives of relationship, their orientation to interdependence, their subordination of achievement to care, and their conflicts over competitive success leave them personally at risk in mid-life, though generally construed as a problem in women's development, seems more a commentary on this society and on the representation of development itself.

In suggesting that the consideration of women's lives and of adulthood calls attention to the need for an expansion in the mapping of human development, I have pointed to a distinction between two modes of self-definition and two modes of moral judgment and indicated how these modes reflect different ways of imagining relationships. That these modes are tied to different experiences may explain their empirical association with gender, though that association is by no means absolute. That they reflect different forms of thought--one relying on a formal logic whose development Piaget has described, the other on a narrative and contextual mode of thought whose development remains to be traced--indicates the implication of this distinction for psychological assessment and education.

The experiences of inequality and of interdependence are embedded in the cycle of life, universal because inherent in the relationship of parent and child. These experiences of inequality and interdependence give rise to the ethics of justice and care, the ideals of human relationship: the vision that self and other will be treated as of equal worth, that despite differences in power, things will be fair; the vision that everyone will be responded to and included, that no one will be left alone or hurt. The adolescent, capable of envisioning the ideal, reflects on the childhood experiences of powerlessness and vulnerability and conceives a utopian world laid out along the coordinates of justice and care. This ability to conceive the hypothetical and construct contrary-to-fact hypotheses has led the adolescent to be proclaimed a "philosopher," a "metaphysician par excellence" (Kohlberg and Gilligan, 1971; Inhelder and Piaget, 1958). But the representation of the adolescent's moral

philosophy in the literature of developmental psychology has been limited to the portrayal of changes in the conception of justice, the growing apprehension of the logic of fairness in terms of the reciprocal operations of equality and reciprocity. My own work (Gilligan, 1982) has expanded this description by identifying two different moral languages, the language of rights that protects separation and the language of responsibilities that sustans connection. In dialogue, these languages create the ongoing tension of moral discourse and reveal how the fundamental dialectic of separation and attachment in the process of identity formation generates the themes of justice and care in moral growth. This expanded account of identity and moral development allows a more complex rendering of differences and points to the need to trace the evolution of both modes and to foster their development through education.

The old promise of a liberal education, of an education that frees individuals from blinding constraints and engenders a questioning of assumptions formerly taken for granted remains a compelling vision. But among the prevailing assumptions that need to be questioned are the assumptions about human development. The lives of wcmen in pointing to an uncharted path of human growth and one that leads to a less violent mode of life are particularly compelling at this time in history and thus deserve particular attention. The failure to attend to the voices of women and the difficulty in hearing what they say when they speak has compromised women's development and eduation, leading them to doubt the veracity of their perceptions and to question the truth of their experience. This problem becomes acute for women in adolescence when thought becomes reflective and the problem of interpretation enters the stream of development itself. But the failure to represent women's experience also contributes to the presentation of competitive relationships and hierarchial modes of social organization as the natural ordering of life. For this reason, the consideration of women's lives brings to the conception of the aims of education and of development a much needed corrective, stressing the importance of narrative modes of thought, the contextual nature of psychological truths, and the reality of interdependence in human life.

The process of selection that has shadowed this vision can be seen in Kohlberg's reading of Martin Luther King's (1964) letter from the Birmingham jail. Kohlberg extracts King's justification for breaking the law in the name of justice but omits the way in which King embeds his vision of justice in a vision of human connection. Replying to the clergy who criticized his action, King not only offers a justification of his action but also defends the necessity for action, anchoring that necessity in the reality of interdependence: "I am in Birmingham because injustice is here. I cannot sit idly by in Atlanta and not be concerned about what happens in Birmingham. Injustice anywhere is a threat to justice everywhere. We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly." Thus, like Bonhoeffer (1953), who stated that action comes "not from thought but from a readiness for responsibility," King ties his responsiveness to a caring that arises from an understanding of the connection between people's lives, a connection not forged by systems of

rules but by a perception of the fact of relationship, a connection not freely contracted but built into the very fabric of life.

The ideal of a liberal democratic society--of liberty and equality--have been mirrored in the developmental vision of autonomy, the image of the educated man thinking for himself, the image of the ideal moral agent acting alone on the basis of his principles, blinding himself with a Rawlsian "veil of ignorance" (1971), playing a solitary Kohlbergian game of "moral musical chairs" (1981). Yet the developmental psychologists who dared with Erikson (1970) to "ask what is an adult," immediately began to see the limitations of this vision. Erikson himself has come increasingly to talk about the activity of taking care and to identify caring as the virtue and strength of maturity. When integrated into a developmental understanding, this insight should spur the search for the antecedents of this strength in childhood and in adolescence. Kohlberg (1973), turning to consider adulthood, ties adult development to the experience of "sustained responsibility for the welfare of others" and an awareness of the irreversible consequences choice. The resonance of these themes of maturity to the voice of the eleven-year-old girl calls into question current assumptions about the sequence of development and suggests a different path growth.

The story of moral development, as it is presently told, traces the history of human development through shifts in the hierarchy of power relationships, pointing to the dissolution of this hierarchy into an order of equality as the ideal vision of things. The conception of relationships in terms of hierarchies thus implies separation as the moral ideal--for everyone to stand alone, independent, self-sufficient, connected only by the abstractions of logical thought. As the power relationships of the family dissolve with the coming to equality of the child in adolescence so the power of conventional truths can yield to the logic of adolescent thought. There is then a particular need in depicting adolescent development and in defining the aims of secondary education for an alternative vision of relationships that encompasses the reality of ongoing connection. Then development can be traced through changes in experiences of relationships that lead to a growing understanding of what constitutes care and what leads to hurt. This different representation of development as a progress of human relationships indicates how the recognition of connection prevents aggression and gives rise to the understanding that generates response.

The entry of different kinds of students into higher education and the changes in the structure of education, if coupled with the voicing of different truths in the central arenas of academic pursuit, offers the promise of a new vision of individual growth and of social connection, a mode of growth that takes place within relationships, a mode of connection based not on rules to regulate competition and limit aggression but on responsiveness to others and self. In my current research on the development of different modes of self-definition and moral judgment, (Gilligan et al., 1982) I have begun to trace the con-

sciousness and practice of relationships as it evolves through childhood and adolescence, showing how in childhood the knowledge of relationships is factually based or concrete operational in Piaget's terms, and then how the understanding of relationships is reconstructed in adolescence with the advent of sexual maturity and the growth of reflective thought. This work has called attention to the limits of current standards of measurement and calls for an expansion in the dimensions of educational practice and psychological research. The development of girls appear at this time to illuminate most clearly the systematic growth through childhood and adolescence of knowledge about human relationships, an understanding of the facts of feeling and of how through feelings relationships work, a perception of the context of relationships in which all individual lives take place. This psychological knowledge of relationships, which gives girls the power to help and to hurt, underlies the development of an ethic of care, an ethic that centers on the themes of inclusion and exclusion, that focuses on who is being left out and hurt. Perhaps today we are in a better position to see who has been left out of the psychological theories that currently guide educational practice and to consider the implications of these omissions. My hope is that the inclusion of these groups will bring a new way of thinking about education, joining to the present concerns with justice and with truth in the abstract a concern with care and with loyalty to persons, extending the focus on reciprocity and rights to an understanding of responsiveness and responsibility in relationships.

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REACTION: BIASES IN THEORIES OF DEVELOPMENT

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The task of reacting to Carol Gilligan's paper is easy and at the same time quite challenging. It is easy because I agree with her completely; her observations concerning how women's experience is unrepresented in our developmental theories are simply true. On the other hand, she is a tough act to follow because she is so perceptive, and she writes so well. What I would like to do here is to call attention to two additional gaps in developmental theories. I will do this in a rather abbreviated and compressed fashion because, after all, this is merely a reaction.

Platonism

The first problem that afflicts most developmental theories, but is most glaring in the cognitive developmental tradition, is galloping Platonism. As the reader undoubtedly remembers, Plato sets forth a seductive thesis that goes as follows: (A) That which is highest in the realm of abstraction is highest in the realm of being; (B) That which is highest in the realm of being is highest in the realm of value. Plato's thesis has been adopted uncritically by cognitive psychologists from Werner (1961) and Vygotsky (1962) to Kohlberg (1963) and Luria (1976). Plato's thesis is manifested chiefly in the hoary concrete-abstract distinction. This distinction is used to stigmatize the concrete and glorify the abstract. We have, then, both Francis Galton (1883) and Heinz Werner (1961) telling us that imageless thought is more valuable than thought infested by imagery. Curiously, the thought processes of women, children, lunatics, and aborigines are all typified by imagery whereas middle-class European men have the capacity for imageless thought.

In the same way, Piaget (1963) tells us that thought develops out of an initial set of sensory-motor schemata, through concrete operations (where thought is somehow "tied" to the physical world), to formal operations (where thought can operate on thought). Similarly, for Kohlberg, the "highest" realms of moral thinking are concerned with abstract principles of justice as opposed to the concrete rights and obligations of specific individuals.

For readers indoctrinated in the inevitable rectitude of the concrete-abstract distinction it may come as a shock to hear someone say it is all ideology and a big mistake. Nonetheless, that is precisely what I want to suggest, and for three reasons. There are methodological, epistemological, and moral grounds for criticizing the concrete-abstract distinction.

On methodological grounds it turns out to be very difficult to tell with any reliability what precisely counts as concrete and what counts as abstract. Specifically, if one studies in a controlled and systematic way a set of judgments, one will find at least three major kinds of distinctions are obscured by the concrete-abstract polarity. There is first the distinction between using personal versus impersonal criteria for judgment. Thinking about problems personally is considered concrete; thinking about them impersonally is abstract. For example, if I evaluate a painting based on my own set of likes and dislikes, and on my own background of experience, that is considered concrete. If I evaluate it based on a set of criteria that has somehow been derived from the personal likes, dislikes and experiences of a lot of people, that is considered abstract, and therefore supposedly better. It is as if to say that averaging out a number of people's criteria into some set of criteria that is really nobody's is better than relying on one's own personal criteria--which is nonsense. Second, there is the distinction between using particular criteria in one's reasoning as opposed to using general criteria. People who focus on the details of the problem at hand (e.g., getting this paper written) are concrete; persons who place the problem in a larger context (e.g., this is just one problem in the larger context of scholarly writing) are abstract. Finally, there is the literal-metaphorical distinction. Persons who stick to the problem at hand are concrete; persons who see problems as metaphors for larger issues (e.g., Freud's *Totem and Taboo* (1950) is a metaphor regarding our ambivalent relations to authority) are abstract. The man who worries about how to build his own house is concrete. The man who thinks about building a society is abstract. Somehow, the quality of the finished product--the house--becomes secondary to the way in which the man approached the problem--which is again nonsense.

Whether it makes sense to make these three distinctions, we continue to make them, believing that we should make simplistic concrete-abstract distinctions in the way people think. Applying these distinctions to human subjects, we find they are age related

and correlated with IQ. But, using these distinctions, it is easy to show that most writing in psychology is altogether concrete. For example, Arthur Jensen (1969) still defines intelligence as that which IQ tests test.

The concrete-abstract distinction is flawed on epistemological grounds because it first arises in the context of Plato's discussion of concept formation. To explain where concepts come from Plato postulates the existence of a world of pure forms, existing in a nontemporal, nonspatial universe (abstract), and objects in our world (concrete) are understood by their relationship to the ideal forms, the knowledge of which we have or acquire intuitively. The notion of Platonic hyperspace is pernicious because it leads to mysticism--Kohlberg's stage six. But more importantly, the (abstract) argument regarding the process of concept formation is decisively refuted in Wittgenstein's (concrete) *Philosophical Investigations* (1953). There, Wittgenstein argues that concepts are formed out of a recognition of "family resemblances" among concrete exemplars of a class, the boundaries of classes are "fuzzy," and the members of a class are grouped usually based on common usage. In other words, concepts are man made, but come to be seen as natural because we are so used to using them to organize our thinking. Wittgenstein's analysis destroys both the notion of Platonic hyperspace and the concrete-abstract distinction.

The moral reasons for rejecting the concrete-abstract distinction come from existentialism. In that (highly abstract) tradition we are required to attend to the moral requirements of everyday life, to concrete reality, to the inevitable (concrete) reality of our own death. To the degree that we think about, for example, moral matters in abstract terms, we live in bad faith, and we dehumanize others. Thinking about other people in abstract terms is regarded as deeply pathological as well as immoral because dealing with others in an impersonal manner allows one to treat others as objects and to do all sorts of dreadful things to them in the name of science and rationality.

Definition of Developmental Phases

A central insight of developmental psychology is that the psychological properties of people change over time. But there is little agreement about how these properties change or what the nature of the change might be, other than saying that it is a move from concrete to abstract. But if we dispense with the concrete-abstract distinction, what is left?

I would like to suggest that the major causes of development, and the major forms in which it is manifested, are a function of the interaction patterns in which a person is involved. In a society such as ours, these interaction patterns can be grouped in three (or perhaps more) categories. In the first, one is locked in a set of

essentially authoritarian relationships as one must interact principally with one's parents and other adults. In the second, one is involved in a set of presumably egalitarian relationships as one makes one's way in the peer group. In the third, one must integrate the lessons of the first two periods as one makes one's way in bureaucratic organizations.

Whatever the neurological and hormonal transformations that occur over time, the child's psyche is crucially shaped by the kinds of relationships he or she is involved in. These social relationships will play as large a role as cognitive restructuring in giving the phases of the developmental process their distinctive stamp.

There is a deeper reason for paying attention to the characteristic relationships in which a child is lodged. And that concerns a methodological problem. Research in developmental psychology depends on questionnaire data, on responses to various kinds of interviews. The methodological question concerns what those responses to questionnaires and interviews mean. Conventional wisdom has it that those responses parallel in a more or less direct way the structure of the psyche. But is that so, are moral reasoning interviews a kind of psychological "cat scan"? I think an alternative interpretation can be put forward that requires at least momentary consideration.

Depending on the child's age, his or her response to interviews and questionnaires may reflect, not the structure of his or her psyche, but the structure of the relationships in which the child is involved. This means that children before the age of about 10 will be concerned with telling the investigator what they think he or she wants to hear. Increasingly after age 10 children will provide answers that they think their peers will want to hear. Finally, in adulthood, responses to interviews will reflect a person's accommodation to interpersonal and impersonal relationships in the world of work. Gilligan hints at this when she describes the interpersonal nature of the interview. The interviewer's questions fit well with the boy's responses, so, full of confidence in what he was saying, he elaborated on themes brought out by the interview and supported by the interviewer. The girl's responses were not what the interviewer wanted to hear, so she became less sure and less eloquent as the interview proceeded. The results of the interview may tell us more about the interpersonal dynamics of the interview situation than about anything else, let alone the children's moral reasoning.

To summarize the foregoing, I have suggested that the current theory in developmental psychology contains some blind spots. Carol Gilligan has perceptively described the most important of these--that these theories reflect an exclusively male perspective. But a second blind spot is caused by a near total belief in the concrete-abstract distinction. And a third is produced by a naive willingness to take at face value responses to questionnaires and interviews. Rather than reflecting the present structure of the psyche, I have suggested

that these responses may reflect the structure of the social relationships in which the child is engaged.

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CONTEXTS FOR ADOLESCENT DEVELOPMENT: THE INTERACTION OF SCHOOL, HOME, PEER GROUP, AND WORKPLACE

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> A primary responsibility of educators is that they not only be aware of the general principle of the shaping of actual experience by environing conditions, but that they also recognize in the concrete what surroundings are conducive to having experiences that lead to growth. Above all, they should know how to utilize the surroundings, physical and social, that exist so as to extract from them all that they have to contribute to building up experiences that are worthwhile.
>
> --John Dewey

The question I have been asked to address is: "In what critical ways does the secondary school differ from other environments, such as home, work, and peer group, in its potential for influencing adolescent development?" Given the central place school occupies in the lives of adolescents in the United States, this is an important question for anyone concerned about adolescent development. It is especially important for those of us who believe that development is the proper aim of education. In order to make secondary schools as effective as possible in fostering adolescent development, we must assess their potential influence in relation to that of the other environments in which adolescents lead their lives.

I shall begin by suggesting four distinctive contributions secondary schools can make to adolescent development. Next I shall make a case for the principle that environments influence human development interactively, not independently, and that, as a result, we cannot understand the influence of secondary schools on adolescent development without attending to the influences of other environments. The best illustration of this principle is also its most serious

consequence: socio-economic status is strongly associated with school performance. Research that illuminates the process linking race and class to school performance supports the argument that environments influence development interactively. The paper will conclude with a discussion of implications for research on adolescent development and for educational practice.

Before proceeding, I should define adolescent development. *Development*, as used in this paper, will mean what Dewey (1938), Bronfenbrenner (1979) and others have meant by it: the increasing ability of a person to understand and act upon the environment. This definition makes development nearly identical to learning, when affective and psychomotor learning are included with the cognitive domain. Development, however, is broader because it includes physical growth. Socialization is a component of development so defined. An invariant sequence of stages is not critical to this definition of development; indeed, it allows for the possibility of regression (contra Kohlberg and Mayer, 1974). *Adolescence* will be treated as synonymous with secondary school age, without making the sometimes useful distinctions among early, middle, and late adolescence, adolescence and youth, and developmental stage versus age definitions.

Schools' Unique Contributions to Adolescent Development

There are four major areas of adolescent development in which schools have more influence than other environments in which adolescents are found. First, schools have as a major purpose the teaching of academic knowledge and skills. As a consequence, adolescents learn in schools knowledge and skills that they would be less likely to learn elsewhere. A second distinctive feature of schools is that they are formal organizations. Intentionally and unintentionally they help students develop skills and attitudes to behave in formal organizations. Third, schools propagate a set of beliefs and attitudes that constitute an important part of the national culture among adolescents from diverse families and communities. By going to school, adolescents develop competence with this national culture. Finally, without clear intent, schools provide the principal arena within which adolescent peer groups form and operate, providing adolescents with an opportunity to develop social skills.

The first three contributions are neither unique to secondary schools nor new. Cremin touched on all of them in his description of the spread of public grammar schools in the United States in the mid-nineteenth century.

> The school performed many functions: it provided youngsters with an opportunity to become literate

> in a standard American English via the Webster speller and the McGuffey readers; it offered youngsters a common belief system combining undenominational Protestantism and nonpartisan patriotism; it afforded youngsters an elementary familiarity with simple arithmetic, bits and pieces of literature, history, geography, and some rules of life at the level of the maxim and proverb; it introduced youngsters to an organized subsociety other than the household and Church that observed such norms as punctuality, achievement, competitiveness, fair play, merit, and respect for adult authority; and it laid before youngsters processes of reasoning, argument, and criticism--indeed, processes of learning to learn--that were more or less different from thought processes proffered earlier and elsewhere (1977, p. 51).

What is new since the time Cremin wrote about is the near-universality of secondary schooling among adolescents. The concentration of adolescents in secondary schools is what makes them so important as places to meet and do things with peers. Let us attend to each of these four functions of schools in turn.

1. Teaching Knowledge and Skills

The instructional function of schools is the most straightforward. Schools are supposed to teach students things they did not know before and probably would not learn elsewhere, preferably things they will use outside of school. These things include not only facts and skills--when the Declaration of Independence was signed and how to divide by fractions, for example--but also ways of thinking about issues and the capacity to continue learning.

Hyman, Wright, and Reed (1975) have assembled convincing evidence that schools do, in fact, teach knowledge and the capacity to continue learning. Although it might seem gratuitous to proffer evidence on this matter, they do so in response to the widespread interpretation of the Coleman Report (1966) as indicating that schools have no effects. Reanalyzing data from 51 studies done between 1951 and 1968, they found a strong and consistent association between years of schooling completed and knowledge, even after gender, social class, occupation, place of residence, and other variables were controlled. Furthermore, they found an equally robust association between years of schooling and knowledge seeking. While one can speculate about the causal sequence in this association, the least favorable conclusion must be that schools are a major source of knowledge for those who are inclined to seek it.

In what ways do schools change people's ways of thinking? Scribner and Cole (1973), on the basis of their own and others' testing of schooled and unschooled people in developing countries, suggested that formal schooling, even after only a year or two, results in four kinds of changes in the way people think. The first two of these were based on research by Luria (1976) on Central Asian peasants: 1) schools teach people to classify items into abstract categories, and 2) people who have attended school are willing and able to state conclusions to syllogisms, while unschooled people usually reject the premises and refuse to draw conclusions. Scribner and Cole's own research led them to identify two additional kinds of changes: 3) "unschooled populations tended to solve individual problems singly, each as a new problem, whereas schooled populations tended to treat them as instances of a class of problems that could be solved by a general rule" (p. 554); and 4) schooling gave people the ability and the inclination to use language to describe what they did. They noted the contrast between reliance on language in schools and the much greater use of "observational learning" outside of classrooms, using the example of a young person learning to weave by watching an adult.

These and other studies can be interpreted as establishing the strong contribution of schools to cognitive development, with the ability to think abstractly defined as the key feature of that development. But, Cole, Sharp, and Lave (1975), after reviewing the evidence, questioned whether another interpretation might not be equally valid. Pointing out that those who have attended school are more familiar with test-taking, they questioned whether the superior performance of schooled people on cognitive tests reflects their familiarity with such tests rather than the acquisition of more sophisticated ways of thinking.

> Perhaps, the impression of educated subjects as general problem-solvers is an illusion, produced by the narrow range of tasks, all of them derived from school contexts, which we selected to represent the domain, 'cognitive development.' The fact of the matter is that we have no direct evidence that educated subjects differ identifiably from their uneducated counterparts in the way they transfer their learning in any contexts other than our tests. Just as important, we have no idea of how often the intellectual demands represented by our experimental tasks are ever encountered outside of the educational context from which they were derived.

It appears that schools do teach knowledge and skills, including skills in performing abstract classification and reasoning tasks and tasks requiring reading, writing, and calculating, though Cole,

Sharp, and Lave force us to question how much of this learning may also be acquired outside of schools. It also appears that those who have attended more years of schooling are more likely than others to seek knowledge independently. The key issue is not whether schools teach knowledge and skills but whether they could do so more effectively and efficiently. I shall return to this issue below and address the transfer of school learning to nonschool situations.

2. Teaching How to Behave in Formal Organizations

The second unique contribution of schools, teaching students to function in formal organizations, is not always viewed positively. Critics see the formal organizational structure of schools as having primarily negative consequences--a view which must be questioned. For example, according to Katz (1971), the source of schools' discriminatory power against students of lower social class is their bureaucratic organization and governance. But, while Katz's essay is a powerful and useful indictment of both the way in which public schools operate and the contrast between their goals and functions, he failed to prove either that the other organizational models that appeared historically before the triumph of bureaucracy would not be similarly discriminatory or that bureaucratic organization is the source rather than simply the means of middle class dominance. His earlier work (1970) made the point that compulsory schooling itself was a point of strong contention between working class and middle class people, without reference to the organizational structure of those schools. Illich (1970) is another radical critic of conventional schools who attributed many of the ills of schools to their bureaucratic structure. He, however, treated schools as merely the symptom of a basic flaw in the social organization of modern societies: an overreliance on credentials and formal organizations of all kinds. "Deschooling" to Illich meant more than just dismantling schools; it meant reorganizing society and basing it on voluntary associations that lack hierarchies and barriers to entrance in order to enlarge the arena for personal initiative. Illich's critique, like Katz's, calls to our attention easily ignored consequences of the ways schools operate. But, while his vision of what might be is provocative, it is hopelessly unrealistic.

Bureaucracy is as necessary to the kind of world we live in as mass communication, rapid long-distance transportation, and international trade. Even if reality could more closely approximate the Jeffersonian ideal of small participatory groups controlling their own destinies--an ideal that is shared with some variations by romantics of both left and right--there are many crucial issues such as global commerce and pollution control, that require larger and inevitably bureaucratic forms of social organization (Dahl, 1970).

Therefore, in a society dominated by large formal organizations, including governments, employers, and the providers of goods and services, young people need to learn the difference between their families, peer groups, and other primary groups on the one hand, and formal organizations on the other. Without understanding at least that there are consequences to ignoring rules and that there is a difference between persons and positions, the citizen of a modern society cannot hope to "understand and act upon the environment." Several specific attitudes and abilities, including responsiveness to externally-controlled incentives, willingness to delay gratification, the ability to tolerate being treated as a role occupant and member of a category rather than as an individual, and the ability to diagnose and use both formal and informal organizational structures, equip a person to function adequately as a consumer and employee; they enable a person to function effectively in subordinate roles though not necessarily as a participatory citizen. (See Almond and Verba's (1963) distinction between subject and citizen competence.)

Schools, as Dreeben (1968) pointed out, are the first settings in which young people are taught these critical skills and understandings. Some of this teaching is explicitly a part of the disciplinary structure of a school and classroom, obedience to rules and respect for the authority of office, for example. Some is tied up with the performance of academic work, which involves the teacher's incentive structure. Practices like sorting students by grade level and ability are justified on grounds of efficiency, but they also train young people to think of themselves as belonging to categories and to accept the imposition of limitations and the granting of privileges solely on the basis of their membership in those categories.

What is most useful in Katz's (1971) essay is his linking of bureaucratic behavior with middle class norms. While lower-class adolescents need to learn how to function in formal organizations as much as middle-class adolescents do, the latter have the advantage that they are also taught such behavior at home and in their peer groups. They therefore have a distinct head start and can more easily learn their lessons. Lower class adolescents have more to learn and face a difficult challenge in trying to catch up. Getzels (1974) attributes the difficulty to discontinuities between the values and language of lower-class families and schools. That challenge is exacerbated by the fact that many of the behavioral expectations of schools seem arbitrary and unrealistic, leading some lower-class adolescents to reject all such expectations, with dire consequences in other environments, especially the workplace.

3. Conveying a Common Culture

It is widely recognized that schools in this country help to convey a common culture, although I know of little research supporting this point. Perhaps the best evidence for it is the reluctance of

certain subculture groups, from the Amish to the Black Muslims, to send their children to public schools. There is clearly a great deal of room for debate about how effective schools can be, have been, and ought to be with regard to this function. Growing recognition that the "melting pot" has always been mythical and the rising popularity of "pluralism" have reduced the traditional emphasis on schools as transmitters of a common culture. For example, the expectation that schools can and should perform this function has been challenged by the successful movement to enable, then require bilingual instruction. Simultaneously, various interest groups such as nonwhites and women have been increasingly active in redefining what that common culture ought to be. Currently, the growth of private and parochial schools demonstrates a desire on the part of many parents to select which version of the common culture their children will learn; whether tuition tax credits will indirectly provide tax support for this choice remains to be seen. Nevertheless, despite these challenges, it cannot be denied that the near universality of schooling and the essential similarities in both content and process from place to place contributes to cultural cohesion and introduces young people whose families and neighborhoods are dominated by distinctive subcultures to the knowledge, manners, values and expectations of the mainstream culture.

Along with more visible controversy about this function of schools, recent years have brought a new and powerful force for cultural commonality, television. Unlike schools, which were introduced explicitly for this purpose and established by means of democratic procedures, television has rapidly entered the culture as "mere entertainment" through the personal choice of individual families to purchase a receiver. Since television sets are found in nearly every household in the United States, it is difficult to assess whether they are more or less effective than schools in promulgating a common set of beliefs and values, and whether those beliefs and values are consistent with those that thoughtful citizens would wish to see spread widely. We only know that the habit of watching television is common, that the results include national familiarity with a whole set of characters and products ("Who shot J.R.?" "Show us your Underalls."), and that serious questions can be raised about the developmental effects of both the content of much of the programming and the relative passivity of watching. Goldsen (1978) and Condry (1981) are two who have examined what evidence there is and raised questions about television's influence on children. Of the four functions of schools with respect to adolescent development, conveying a common culture is probably the most problematic at this moment in history, given the challenges to what once seemed a consensus about what that culture is and the competing influence of television.

4. Providing Opportunities for Peer Interaction

Historical accounts of adolescence in the United States and Europe (Kett, 1977; Gillis, 1974) alert us to the fact that young people have found ways of associating with each other for centuries, both formally and informally. But they also make two points clear. First, the number of years contemporary adolescents spend free from work obligations is much greater than in the past, enough to make adolescence as we know it an "invention" of the modern period. Second, the concentration of so high a proportion of young people for so many years in adult-dominated settings is quite new in history. Clark (Panel on Youth, 1974) has pointed out that only 5% of the high school age group attended school in 1870 and that the mean number of days in school each year was 78, compared with 90% enrollment for 163 days a year by 1970.

One consequence of rounding up all the available adolescents and putting them together in schools is that secondary schools have become the principal location in which adolescents get to know each other. We cannot, therefore, speak of schools and peer groups as independent settings; schools are inhabited by peer groups.

Coleman and Bronfenbrenner have been two of the most vocal critics of the way in which schools have dealt with this phenomenon. Coleman (1961) demonstrated that high school students form a small society with a prestige hierarchy rooted in values that conflict with schools' academic functions. He recommended that interscholastic competition, which engenders so much respect for the athletes who bring glory to their school, be adopted in intellectual matters, as in debate, to bring the peer culture into closer harmony with academic values. He also suggested that adolescents be given more responsible roles in the adult community, an approach elaborated in the report of the Panel on Young (1974), which Coleman chaired. Bronfenbrenner (1970), sharing Coleman's doleful view of the influence of the peer group, reported on the ways in which schools in the Soviet Union control peer influence in order to ensure that all influences contribute to building "Communist morality." He contrasted the careful way in which Soviet practices cohere to produce socially valued behavior in children with the haphazard and inconsistent practices of U.S. schools in order to make the same point that Coleman stressed: the influence of peers is not independent of adult actions and institutions; it takes the form and has the results that adults encourage and allow.

Devereux (1970), whose research supported his concern that peer groups undermine parental values, also nicely summarized the other point of view. This view, articulated by such social scientists as Piaget (1932), Parsons (1942) and Kohlberg (1964) holds that the peer group is a necessary testing ground for moral values. Whether one views the influence of the peer group as mostly positive

or negative, there can be no question that adolescents must learn to interact with peers as part of their development. All of the developmental tasks of adolescence require a broadening circle of social contacts on conditions of relative equality, which can only occur among peers. Therefore, the secondary school's function as an arena for peer interaction is essential to adolescent development even though peer groups can sometimes and in some ways retard development as well.

We can say with some assurance that secondary schools have the potential to influence adolescent development positively in these four areas, but saying that doesn't take us very far. These are extremely broad aspects of development, too broad to serve as educational objectives or as criteria for assessing the effectiveness of a secondary school. Furthermore, we know that there are some schools that are more effective than others in these and other realms and that adolescents attending the same school, even sitting in the same classrooms, attain quite different levels of academic knowledge and skills, organizational competence, awareness of mainstream culture, and social sophistication. In order to bring all schools and all students closer to the best, we must be able to account for these differences. That accounting, in turn, requires an understanding of how environments influence human development.

How Do Environments Influence Development?

Bronfenbrenner, in *The Ecology of Human Development* (1979), presented a theory-in-progress about how environments influence human development. I shall set out a highly condensed version of his theory, adding two key principles from Dewey.

First, the term "activity," will be defined:

> Activity is at once the source, the process, and the outcome of development. The extent to which it occurs in an ever-expanding ecological environment thus becomes the measure of developmental progress (Bronfenbrenner, 1979, p. 289).

Development, in other words, enables a person to engage in more effective and more appropriate activity, but activity is simultaneously the means by which development occurs. Although development may be said to take place in one environment, the test of whether a new conception or a new competence represents development is whether it can be used in another environment (Bronfenbrenner, 1979, p. 35). One environment, therefore, may be the context for development, but

development is demonstrated in another, which may, in turn, be the context for further development.

Activity, as used here, is more than mere motion. In the first place, it is what Bronfenbrenner, following Lewin, called "molar activity," which is contrasted in a chemical analogy to "molecular behaviors." Molar activity is "an ongoing behavior possessing a momentum of its own and perceived as having meaning or intent by the participants in the setting" (Bronfenbrenner, 1979, p. 45). Molar activities are more than momentary in duration and are goal-directed. Asking a question is a molecular act; carrying on a conversation is a molar activity.

The second part of the definition of activity is the criterion Dewey stated for education as growth: *continuity* (1938, pp. 36-38). Activity is developmental when it makes possible further activity that is more complex and more efficacious. Some types of continuing goal-directed behavior reduce the range of future activity, injecting heroin, for example. The developmental potential of a particular environment (setting, context) depends upon the activities, roles and relations that are possible in it (Bronfenbrenner, 1979, p. 163).

Dewey's principle of *interaction* is critical to understanding how environments influence development. Dewey stressed that a person is not a passive recipient of environmental influences and that, as a result, the influence of a particular environment cannot be known or controlled solely on the basis of the objective characteristics of that environment. It is the interaction of the person with the environment that influences development (1938, pp. 42-44). Dewey applied this principle to traditional classroom instruction by arguing that it is futile to expect a teacher's lecture to be equally effective for all students, not just because of differences in intelligence or attentiveness but because each student must incorporate that material with his or her unique set of capacities and orientations. It is not the lecture itself that educates but the student's mental processing of the lecture, which will vary according to knowledge, attitudes, skills and conceptual organization schemes the student has developed from previous experiences and according to expectations the student has for the future.

A broader implication of the principle of interaction is that the same environment will influence different persons differently. This point must be distinguished from a similar one made by Barker: "the same environmental unit provides different inputs to different persons" (1968, p. 205). Barker usefully pointed out that people in the same setting are not all doing the same thing or having the same thing done to them. Dewey's point was that the environment's influence depends not only on its objective characteristics, but also on what each person makes of it. Even if the variation Barker

called attention to could be eliminated, the variation in what each person brings to a setting would result in different influences from the same environment.

The prior Deweyan principle of *continuity* is closely related to the principle of interaction. Continuity defines development as self-perpetuating, leading always to further development. One consequence of the principle is that "every experience influences to some degree the objective conditions under which further experiences are had" (1938, p. 37). Another way of stating this principle is to say that an environment's influence is never independent; it only operates with or against the influence of other environments. Restating Dewey's principles, there is interaction *between persons and environments* and there is interaction *among environments*.

Some environments, however, exert more influence than others. Bronfenbrenner defined as *primary settings* those environments ("microsystems") that "set in motion and sustain patterns of motivation and activity in the developing person that then acquire a momentum of their own" (1979, pp. 284-285). He offered the family, the workplace, and the peer group as key primary settings.

The "patterns of motivation and activity" set in motion by primary settings constitute a person's *developmental trajectory* (p. 285). This is a useful image for conceiving the continuity and interaction of development. The force and direction of a person's development are determined principally by the interaction of genetic factors and the influences of primary settings that carry through many different environments. Most non-primary settings do not substantially alter the trajectory, but each may have a subtle, small-scale influence. A person's developmental trajectory is the resultant of all these influences.

Settings such as schools, homes, peer groups, and workplaces, exist within larger environments, such as neighborhoods, communities, regions, cultures and subcultures, and nations. All those environments exert influence. Although it is simplest to assume that each setting has a unidirectional influence on a person, in actuality a single setting may exert disparate and sometimes directly conflicting influences. We speak of the influence of "the home," but homes usually contain one or more parents, siblings, and television sets, all of which may represent competing influences.

Bronfenbrenner proposed that development is enhanced by a delicate balance between sameness and difference in the settings a person inhabits. While a basic compatibility among the activities, roles, and relations in various settings promotes development, the movement from one primary setting to another is developmental to the extent that there is a "match between the developmental trajectory generated in the old setting and the balance between challenge and support

presented in both the new setting and its interconnections with the old" (1979, p. 288). The notion is similar to Piaget's (1932) "psychological disequilibrium," which leads to cognitive development when one confronts phenomena that cannot be adequately explained using one's current stage of reasoning but that are not totally beyond comprehension.

To summarize, the theory presented here includes four key terms: development, activity, primary settings, and developmental trajectory. It stipulates that environments influence human development through the interaction of their objective conditions and the subjective states of the people in them and that each environment's influence, therefore, interacts with the influences of other environments. The most important consequence of the principles of continuity and interaction is that participation in the same environment will affect the development of different people differently, according to their developmental trajectories. Variations in environmental influence also follow from the different activities, roles, and relations in which persons engage in the same environment. Development is enhanced by progressively greater challenge within and among settings when that challenge does not exceed the support available.

Race, Class and School Performance

One function of a theory is to organize what we know in such a way that we understand it better. A good theory illuminates the processes underlying observed relations. Let us test this theory by applying it to the question of how the school differs from other environments in its influence on adolescent development. It would be consistent with the theory if schools did not affect all adolescents the same way, and if part of the difference could be attributed to differences among other environments that either reinforce or undercut the influence of the school.

One thing we know about schools is that some students learn more from them than others and that students' race and class are strong predictors of school performance. Whether the sample is of national scope (Coleman, et al., 1966; Jencks, et al., 1972), a town (Hollingshead, 1949/1975), or a single classroom (Rist, 1970), there is a strong tendency for school performance to reflect socio-economic status and for white students to perform better than black students even after controlling for class. Although Jensen (1969, 1980) has claimed that genetically determined differences in intelligence are the best explanation for differences among races in school performance, he has done so by ignoring real and powerful differences among the environments people live in and consequent differences in the effects of schooling, even when black and white students attend the same schools. The different effects of schools on students of different class and race is the best illustration of a single

environment's affecting people differently. The theory presented above offers an explanation of this phenomenon.

In contrast with the strong evidence that school achievement is related to class and race, there is only scattered evidence showing why this should be so (beyond the kind of unconvincing evidence Jensen presented for his explanation). Evidence from community studies, studies comparing the influence of peers and parents, and studies of parents' child-rearing practices and values supports the theory that environments have their influence interactively.

Hollingshead's (1949/1975) classic community study remains one of the most enlightening studies of the process through which social class is transmitted from one generation to the next. He lays out in awesome detail the way in which a young person's social class within a relatively homogeneous community affects every aspect of his or her life, including school performance. His summary of the interaction among environments is excellent:

> The behavior patterns learned by the child in the home and the neighborhood are carried into the school and other areas of community life. In school the child encounters children from other neighborhoods who have other behavior patterns and other definitions of behavior. In these nonfamily and nonneighborhood situations, the attitudes and behavior patterns associated with some class subcultures are more acceptable than others....the culture traits that children in the three higher classes have learned at home and in the neighborhood are acceptable at school, but what the lower-class child has learned in his home and neighborhood is generally not approved in the classroom or on the playground.... These differentiating processes continue throughout the elementary school years: they become even more powerful as controls as high-school-aged boys and girls are enmeshed in the pressures of the peer group. Pressure is brought to bear on a child to select friends and recreational pursuits that conform with parental expectations. In all classes, children are usually guided by their parents along lines approved by the class culture (pp. 384-385).

Thus, Hollingshead depicted the peer group's influence as consistent with that of parents because of the class homogeneity of neighborhoods and peer groups.

There has been debate about whether peers and parents exert consistent or conflicting influence on adolescents, especially after Coleman (1961) argued that the influence of peers is frequently in opposition to that of parents. Based on a cross-national replication of Coleman's study, Kandel and Lesser (1972) supported Hollingshead's contention that the influence of parents and peers is usually mutually supported. While they found differences between adolescents and parents in both Denmark and the United States, those differences did not appear to be large or serious. Some differences, such as the relative importance of academic accomplishment versus social or athletic success, of which Coleman made much, diminished as adolescents grew older and approached adulthood. In both countries, adolescents agreed with and relied upon their parents for advice with respect to educational and occupational plans and those plans were supported by their peers. Willis (1977) provides ethnographic data on English working class boys that further confirms consistency between parents and peers. What these studies suggest is that parents and peers act together to pass on the values and behavior patterns of particular social classes to adolescents (J. C. Coleman, 1980).

Studies of parents' child-rearing practices also show how the influence of parents is class-related and reinforces existing class distinctions. For example, Elder (1963) found levels of parental power and frequency of explaining rules to be associated with adolescents' compliance with parental wishes. Children of democratic and permissive parents who explained their rules complied more with their parents and also had higher educational aspirations than children of autocratic parents whether they explained or not. It is lower class parents who tend to rely on autocratic methods, especially physical force (Hess, 1970), which are generally less effective than more democratic and affectionate methods, according to Elder, and less likely to help children and adolescents develop the kinds of orientations and personal styles most valued and rewarded in our society (Baumrind, 1968, 1975, 1978). The reason for this class-related difference in parental behavior was suggested by Kohn (1977), who related parents' values for their children to the conditions of the parents' work. Professionals who were relatively free from supervision and exercised a great deal of judgment in their work, valued independence and creativity for their children. Working class parents, whose jobs were performed under close supervision and required repetitive operations, valued conformity. Although Kohn did not document the actual behavior of parents or its effects on children, he logically assumed that their behavior conformed to some extent with their values. The research also suggests that the methods working-class parents use to inculcate compliance are not very effective.

Ogbu (1974) explained the connections among social status, home environment, and adolescent school performance from a different perspective. In his ethnography of a black and Hispanic neighborhood in Stockton, California, he presented evidence that "subordinate minority" parents gave their children a double message about school performance. On the one had, he found that parents frequently encouraged their children to work hard and get good grades and that they attempted to communicate with teachers when there were problems. (However, they experienced barriers to such communication--teachers uniformly defined communication as parents listening to what teachers had to tell them). On the other hand, parents unintentionally undercut their own advice by telling their children about racial discrimination. The message, "Work hard in school and you'll get ahead," was countered by another message, "It doesn't matter how hard a black/Chicano person works, white people will never let us get ahead." Minority young people responded to the first message by setting high aspirations for themselves. They responded to the second by holding much lower expectations for what they would actually accomplish and by failing to perform to capacity either in day-to-day school work or on standardized tests. This "failure" Ogbu characterized as an adaptation to reality. He also demonstrated that the adaptation was encouraged by the schools themselves, which failed to reward effort with higher grades and failed to offer basic academic advice to students, the counselors preferring to treat school problems as symptoms of pathology instead of explaining practical matters such as course selection and occupational prospects.

In a later book, which examined this theme of minority school failure as adaptation in several cultures, Ogbu (1978) made use of the idea of the "job ceiling," a limit on the types of jobs that are open to members of minority groups. He argued that the virtual exclusion of black and Chicano workers from high-paying, high-status jobs is the most important fact orienting young minority people to school. Realizing that neither outstanding performance nor extended years of schooling can overcome the barriers of discrimination, they choose to avoid the discomfort of struggling for academic success on the grounds that they will probably not be able to get a good job regardless of how well they do. Another way the job ceiling operates, according to Ogbu, is to create a gap in the occupational structure that distorts minority youths' plans. Most of the adults they know are in low-skill, low-wage jobs requiring little schooling. Those adults who are exceptions to this rule are at the professional end of the occupational hierarchy--doctors and teachers, for example. There are too few minority workers at the intermediate levels--such as managers, skilled workers, and technicians. This helps to account for the gap between aspirations and expectations in Ogbu's view. Young people hope to go to college and perhaps professional school but plan, if that is not possible, to take whatever work they can find.

Ogbu's original study (1974) is especially noteworthy for its careful tracing of the interactive, sadly consistent, influences of family, neighborhood, and school. By formally and informally interviewing homes, attending community meetings, and examining school records, he was able to present a vivid description of the pattern of influences. Moreover, he placed that pattern in the larger context of the United States' economic and social structure.

These studies all provide evidence in support of the interaction of influences among the home (represented by parental child-rearing practices), the peer group, and the school such that adolescents' developmental trajectories tend to keep them in or near the social class of their family of origin. On the basis of this evidence, one way to describe how the school differs from other environments in its potential for influencing adolescent development is to say that although the school fosters development in areas where other environments have less or no influence, its potential is constrained by the influence of other environments. Notwithstanding the possibility that schools offer different experiences to students from different backgrounds, those adolescents whose homes and peer groups support school achievement gain more of what schools have to offer than those whose homes and peer groups support values, behavior, and expectations that conflict with the demands and the lessons of the schools. Adolescents in the second category are disproportionately of lower class and racial minority groups.

What about the workplace? Can it somehow break this pattern of mutually reinforcing settings, providing new opportunities for development? There has not been much research on the developmental effects of work on adolescents (Hamilton and Crouter, 1980). The best and most recent study suggests that there are both costs and benefits to part-time work for high school students. Greenberger and Steinberg (1980) found that work appeared to teach some practical knowledge to adolescents who did not do well in school, knowledge that the better students already had. However, they also found that working too many hours per week led to lower grades and poorer school attendance, the number of hours being directly related to age. One of their most encouraging findings was that work appears to provide a context for learning about social relations, even though their subjects reported being less close to both peers and adults in the workplace than in other settings (Greenberger, Steinberg, Vaux, and McAuliffe, 1980).

What evidence there is suggests that workplaces can promote development, but it does not suggest that they are dramatically more potent influences than other settings or that their influence is independent of or even deviant from that of other settings. Most of the jobs adolescents are able to get, whether full-time or part-time, are near the bottom of the occupational hierarchy, requiring little in the way of skill or responsibility. For middle-class

adolescents, such jobs are merely a way of earning spending money while they continue their schooling, which will provide them access to more prestigious, rewarding, and demanding occupations. For lower-class adolescents, the same types of jobs may provide necessary income and are a foretaste of the kind of work they will be doing all their lives. If it is true that environments have interactive influence, then the difference between the present and future orientations of lower-class and middle-class adolescents toward the same workplace will differentiate the influence of that workplace. Havighurst, et al. concluded that in "River City,"

> Instead of finding work to be an alternative pathway to the school for growth to adulthood, we face the stubborn fact that work and school are sections of the same pathway, and a poor school record tends strongly to guarantee a poor work record (1962, p. 142).

Work is both the end and the means of social stratification. Although the workplace can have a salutory influence on adolescent development, it is not the place to look for an exception to the race and class-related interaction of environmental influences. (A more optimistic proposal may be found in Hamilton and Claus, in press).

Implications

It would be quite helpful to know more about how the influences of different environments interact with each other, especially with respect to perpetuating a social structure that is stratified by race and class. In the meantime, recognizing that we will never know as much as we need to know, there are some ways in which the potential of secondary schools for enhancing adolescent development might be increased. The following suggestions for research and practice set out some of the implications of the approach taken in this paper to the question of how secondary schools influence adolescent development in comparison to other settings. The suggestions are accompanied by citations to indicate that they are not totally unrealistic and to provide further evidence in support of the proposition that environments have their influences interactively.

Research on the Interactive Influences of Environments

How can we get better information about the interactive process among different environments as it influences adolescent development? One strategy is the community study, well represented by Hollingshead and Ogbu. Such studies are relatively scarce for several reasons. They are quite challenging and may be more difficult to do in these days

of strict regulations regarding human subjects. Increasing stress on theoretical and methodological rigor in sociology and psychology may also account for their relative scarcity in recent years. Perhaps there has been a lack of imaginative use of opportunities as well; Ogbu's study was conducted as an evaluation of a bilingual education program.

A second strategy involves studying a sample of developing adolescents in more than one setting over time. Use of this strategy is exemplified by work currently being done by my colleague, Ritch Savin-Williams (Savin-Williams and Demo, 1981; Demo and Savin-Williams, in press). In order to gain a better understanding of "the ecology of self-esteem," he obtained a sample of seventh graders that he is following through secondary school. Each adolescent is paired each year with a college student "big brother/big sister," who meets regularly to talk informally and engage in recreational activities. These sessions provide observational data on how the adolescents behave in social situations. In addition, on a rotating basis subjects carry paging devices or "beepers" with them for a week at a time. On a random schedule, excluding sleeping time, the devices "beep" and subjects take a moment to complete a standard self-report indicating where they are, whom they are with, what they are doing, and how they feel about themselves. The resulting data allows for analysis of changes in self-esteem as a function of setting and over time.

A third strategy is the study of deviant cases. The associations that are so well established between class and school achievement are probabilistic; there are always exceptions. We could learn about the ways in which various environmental influences interact by studying the lives of people who have beaten the odds. It may be that the best cases are not the spectacularly successful ones whose supreme endowments have enabled them to achieve fame and fortune despite the encumbrances of poverty and minority status, but the more ordinary people who managed to get a college education in spite of the fact that no one else in their family had ever finished high school and who are now solid middle class citizens rather than artists, politicians, athletes, or tycoons. I would predict that most such people would have strong families in their backgrounds, including powerful substitutes when fathers were absent. There may be some, however, like Claude Brown, whose autobiography (1965) makes it appear that his family was less influential in his unusual success than his native intelligence and self-confidence, with some help from a love of music and a reform school--Wiltwyck. It seems that for those who defy the general trends there is a combination of influences that in some sense compensates for their disadvantages. We need to know how "ordinary folk" draw on their environments to make fruitful lives out of conditions that leave others in despair or lead them to into anti-social and self-destructive behavior.

The examples of deviant cases so far are individual biographies. Another form of deviant case that is pertinent to the issue at hand is the school that consistently exceeds the norms for performance, given

the racial and social class make-up of its students. Edmonds has been using this strategy, locating and studying inner-city black schools where students' test scores exceed the norms and trying to assess what goes on in those schools to produce such results (Edmonds, 1979; see also Cohen, 1979). Some of his findings point toward the influence of out-of-school environments. As Cohen (1981) points out, evidence can be interpreted to suggest that an effective school has a critical mass of well-motivated students in its population. This possibility is one of the rare references in this literature to out-of-school influences on school effectiveness.

A fourth strategy for gaining insight into the interactive influences of environments on adolescent development is the "transforming experiment," suggested by Bronfenbrenner (1979) with reference to Soviet psychology. The transforming experiment neatly links research to practice by systematically altering the main features of one or more primary settings and carefully monitoring both the environments and their developmental effects on participants. (Unfortunately, we are better at trying out new programs than at using them to increase our understanding of human development.) Two types of secondary school innovations that might be treated as transforming experiments and that provide new kinds of environments for adolescent development are alternative schools and experiential learning programs. Although alternative schools are associated with the political and social ferment of the late sixties and early seventies, many have survived into the eighties [*Phi Delta Kappan*, 1981, 62(8)]. There is some evidence that alternative schools and earlier progressive forms of schooling have lasting positive effects on students (Jennings and Nathan, 1977). More thorough studies comparing the influence of conventional and alternative schools on development, and including sufficient documentation of the operational differences between them to allow inferences about the source of any different outcomes, would be very useful. Like alternative schools, experiential learning programs have been subject to more exhortation than examination (Hamilton, 1980). However, evidence is beginning to be reported that they can provide an important supplement to conventional classroom instruction and have favorable developmental effects (Hamilton, 1981). The most impressive study so far is Hedin and Conrad's (1979, 1980), which not only utilizes a variety of measures of development but compares different kinds of programs.

The policy and educational recommendations to follow are, first of all, approaches that seem reasonable and promising in the light of the best evidence we now have. Secondly, they represent potentially illuminating experiments if they are combined with careful research on their operations and consequences.

Approaches to Improving Secondary Schools as Environments for Adolescent Development

Four complementary and overlapping approaches to improving the developmental influence of secondary schools on adolescents are: (1) to bring schools closer in line with Bronfenbrenner's criteria for settings that enhance development; (2) to make schools more efficient and effective in their four distinctive functions, especially instruction in academic knowledge and skills; (3) to attend more carefully to which school influences are and should be developmental in the sense of carrying over into other settings; and (4) to enlist the support of other settings for the functions of the schools. Let us briefly explore each of these.

(1) Bronfenbrenner suggested that a single setting enhances development,

> to the extent that the physical and social environment found in the setting enables and motivates the developing person to engage in progressively more complex molar activities, patterns of reciprocal interaction, and primary dyadic relations with others in that setting (1970, p. 163).

He went on to say that variety in settings, expressed through the varied activities, roles, and relations they provide, enhances development, particularly when the various settings "occur in cultural or subcultural contexts that are different from each other in terms of ethnicity, social class, religion, age group, or other background factors" (1979, p. 213), when the other persons in those settings are more mature or experienced than the developing person (p. 212), and when they engage the developing child or adolescent in "responsible, task-oriented activities outside the home" with adults other than parents (p. 282).

Secondary schools as they are now constituted do not show up well against these criteria. The content of instruction does become progressively more complex and challenging, but not as steadily as it might. The variety of activities increases modestly with the addition of specialized courses and laboratory work and with the increasing variety of extra-curricular activities in secondary schools, but the role of student is a very narrow one, entailing too few activities and relations to maximize development. Moreover, the tendency for schools to serve only a narrow segment of students, and for schools in heterogeneous communities to track students into "ability groups" that tend to include students of similar social, racial, and subcultural backgrounds, severely limits the cultural diversity students can encounter within schools and often restricts the opportunities of the neediest students. The developmental

potential of schools is also limited in that schools contain students within a narrow age range and adults within a narrow range of education and occupation. Finally, while parents and peers may care about how a student performs in school, being a student means ultimately being responsible only to oneself. The consequences of failing to perform adequately do not extend very far beyond the student.

Recognition of these limitations of secondary schools as contexts for adolescent development has motivated a host of recommendations over the past decade that secondary schools provide more varied and complex roles, relations and activities, that they involve adolescents with people of different ages and subcultures, that they engage adolescents in more challenging responsibilities, and that they offer opportunities for adolescents to observe and establish relationships with a variety of adults outside the family. Two of the best sources of these kinds of recommendations are the Panel on Youth (1974) and the Carnegie Council (1980). These recommendations would, I believe, enhance the influence of secondary schools on adolescent development.

These reports have not typically focussed sharply on the narrower instructional function of secondary schools, which may have been a tactical error. Improving the effectiveness of academic instructional methods may be a necessary concomitant to devoting school resources to broader developmental purposes, especially in view of well-founded concern that not enough students are learning "the basics." Sizer (1973) is one of the few who have addressed these two approaches simultaneously, recommending a clearer distinction between schools' academic purposes ("power") and their broader purposes ("agency" and "joy"), and proposing two distinctive school structures to match.

(2) A second, complementary approach to enhancing schools' contribution to adolescent development would be to make them more effective and efficient in their teaching of academic knowledge and skills. We know much more about how to facilitate learning than we put into practice. Advances in the technology of instruction have made it possible for more students to gain more knowledge and skills in less time, yet the technology is implemented in a haphazard fashion and is conspicuously absent from most schools (Berman and McLaughlin, 1976; Goodlad, Klein, and associates, 1970). The technology that seems most promising is not hardware but curriculum, specifically such approaches as "mastery learning" (Bloom, 1976), which have demonstrated efficacy in imparting the kind of learning that tests measure.

One of the reasons, I believe, that new instructional technology has not been implemented as rapidly or as widely as it should be is that teachers fear it will reduce their role to a less interesting,

challenging and effective one, to being technicians rather than masters, depriving them and their students of the satisfaction of multidimensional human interaction. This fear is justified if tightly controlled curricula such as programmed texts and mastery approaches are all that happen in schools. The promise of such approaches, in my view, is their potential for accomplishing more quickly and reliably that part of the schools' task that they are designed to do, thus reserving teacher and student time and energy to devote to other tasks. Those other tasks, particularly conveying a common culture and promoting positive interaction with peers, also have academic content, but they are more closely tied to schools' broader developmental purpose.

Secondary schools that combined a variety of forms of experiential learning in the community with the most powerful types of instructional technology would be better able to impart academic knowledge and skills to adolescents of varying intelligence and family background. While the distinction between direct instruction in subject matter and the application of that subject matter outside the conventional classroom in a setting that is rich in broad developmental potential--publishing a magazine, for example--should not be overdrawn, Sizer's case that a greater distinction would yield better results is convincing.

Opportunities for adolescents to learn in the community would, in addition to imparting and enriching academic learning, teach them how to function in formal organizations other than schools. This might be critically important for young people who have come to view the school as artificial and arbitrary in its regulations. Learning that such organizational expectations as punctuality and dependability are found elsewhere could be quite important to them, especially for future employment.

Exposure of students to a greater diversity of people would greatly enhance the school's potential for helping them understand both the nation's common culture and the subcultural diversity that characterizes it. The primary function of in-school instruction with respect to this understanding would be to encourage critical reflection on the encounters students had with diversity and to combine those first-hand experiences with material from literature and social studies that would help students make sense of them (Newmann, 1975).

The diversity of people and activities adolescents could engage through community learning experiences might substantially affect the way in which peer group interaction influenced them. Many of the negative influences attributed to peer groups are not consequences of peer interaction, but of the narrow, primarily social arena within which adolescent peers are allowed and encouraged to interact by adults. Peer groups devoted as groups to accomplishing serious community improvement objectives are likely to have

different and more beneficial influences, especially since such projects introduce adolescents to a wider range of adults, thus moderating peer influence (Hamilton, 1981).

(3) The most valid indicator of schools' effectiveness in carrying out their instructional function would be evidence that adolescents were actually using what they had learned in other settings. In a modern industrial society, reading and simple arithmetic calculation are required for most jobs and in day-to-day living. Cole, Sharp, and Lave (1975) noted that bureaucratic organizations demand the kinds of managerial, clerical, and record-keeping tasks that school learning prepares people to perform, but questioned how much of school learning is applied in occupational settings. Although engineers use higher math and managers write letters and reports, much of what is taught in secondary schools is surely forgotten, and without apparent harm. How many high school history teachers could pass the algebra test being given next door or the biology test across the hall, and could those teachers pass a history test?

While there is probably some residual value in learning subjects that are later forgotten--learning how to learn, learning about systems of thought, and learning enough to be able to relearn more readily, for example--and there is merit in the traditional emphasis on the liberalizing effects of education, the efficiency and effectiveness of schools might be improved by the effort to relate the content of instruction more closely to the demands of life outside the school. This should not be simple vocationalism, since work, family, leisure and citizen roles are also important. Nor should "preparation" for a future that is assumed to be much like the present guide the curriculum. But paying more attention to the kinds of knowledge and skills people actually use might help schools allocate their resources more productively. The first recommendation, that schools incorporate learning experiences in the community, would help to achieve this improvement by exposing both teachers and students to a wider array of "real world" demands for academic learning.

(4) My fourth suggestion is that ways be found to enlist the support of the other key settings in which adolescents live for the purposes of the secondary school. We need to increase the extent to which the school's influence is supported by the home, community, and workplace. The program described by Smith (1966) provides one example of improving home-school ties, though it could not be applied in secondary schools because adolescents' relations with their parents are less dependent than elementary school children's. Furthermore, that program appeared to be somewhat patronizing to parents, treating them as the recipients of advice and instructions from the school but not asking for their suggestions or encouraging their initiative. Community learning

programs can strengthen a school's reputation, making adults more aware of what the school is doing and more likely to encourage adolescents' attendance and commitment. Schools can also improve their reputations and hence their support in the community by becoming specialized and selective and by having winning athletic teams. Both of these strategies have serious costs, however. A more promising alternative is building links between the school and workplace. This has been a major objective of the Youth Employment and Training Act of 1977, which funded a large number of demonstration projects (summarized by Lacey, 1981; and Darr, 1981). Although the primary purpose of these projects is to prepare students for jobs, efforts of this kind might also make employers of youth more conscious of their educational function and schools more aware of the educational demands of the workplace.

The most powerful way to increase the developmental potential of schools, however, would be to reduce economic and social inequality. Indeed, any other approaches must be considered merely supportive of this basic change in the social structure. As Jencks et al. (1972), Ogbu (1974), Bowles and Gintis (1976), and others have argued, the effort to achieve equality solely through school reform is futile. Changes in schools can have marginal equalizing effects, since there is some room for upward social mobility in our society, but school reform must be designed to help disadvantaged people make use of expanded opportunities and to help the advantaged understand and work toward greater equality, and so to support, not supplant social structural reforms.

Concluding Summary

Secondary schools have the potential to foster adolescent development in four important ways that other environments either cannot do or cannot do as well: 1) they can teach adolescents knowledge and skills; 2) they can teach adolescents how to behave in a formal organization; 3) they can introduce adolescents from diverse backgrounds to a common culture; and 4) they can engage adolescents in developmentally beneficial activities with their peers. The extent to which schools achieve this potential depends in large part whether the other environments in which adolescents spend time reinforce or conflict with the schools' influence. In general, the environments of middle-class white students reinforce the schools' beneficial influence while those of lower-class and minority students conflict in some serious ways with what the schools are supposed to do.

In order to make secondary schools more beneficial influences on adolescent development, we need to expand the variety of roles, relations, and activities adolescents engage in and to create opportunities for adolescents to interact with people of a wider

range of ages and cultural backgrounds. This entails opening up the schools to the larger community and the developmental experiences it can provide, increasing the efficiency and effectiveness of academic instruction through fuller utilization of current and emerging instructional technology, giving more attention to the carryover of school learning to other settings, and enlisting the support of the home, community, peer group, and workplace for the developmental functions of the schools. Reducing racial and socio-economic inequality is both a means and an end of this process.

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REACTION: WHAT'S THE SPECIAL ROLE OF THE HIGH SCHOOL? TO TEACH KIDS TO THINK WELL!

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After an introduction identifying myself and my orientation, I propose to begin with an appreciation and critique of some of the themes developed by Hamilton in his presentation. I will follow that by returning to the original question, reframing it in a way that highlights some "questions within the question" *other* than the ones lifted out and responded to by Hamilton. I will then offer two responses of my own. The first one is harsh, pessimistic, elitist and in my opinion the more valid of the two, but too much of a "downer" to be capable of becoming a rallying point for much but despair. The second is a more moderated view, less "The Truth" (note capital Ts), but perhaps a more felicitous mix of truth with acceptability, and perhaps therefore capable of becoming a rallying point for some real improvements by real people in real schools.

I am pleased, flattered, excited and interested to be asked to participate in this conference. But also apprehensive. For a very particular reason. My reading of the written material distributed in advance leaves me with the strong impression that on this occasion I am finding myself to be in "someone else's church". That would present no problem if my role were simply to sit and listen respectfully. But I am here *as* discussant. That implies active critical evaluation. That makes "being in someone else's church" a *much* more problematic matter. By "someone else's church" I am *not* referring to the fact that I am the only psychiatrist here. In fact I am not here as psychiatrist, but rather, like all other participants, as someone with a central career interest in normal adolescent development, in my case with a special focus on cognitive development. By "someone else's church" I am referring to the fact that I am not in *educational* psychology. Up until the time I got the bibliographies at the back of the working papers distributed in advance of this conference, I thought I knew "the literature on adolescence" well.

I now see that there is a whole "world" of it (in *educational* psychology) with which I am not familiar, particularly of commmentary by educational psychologists on the work of seminal figures in the larger field (whose original work I do tend to know). That unfamiliarity has both its advantages and disadvantages. Like any thoughtful, well intended visitor to an unfamiliar subculture, I have the advantage of "a fresh view," but the disadvantage of a greater risk of the special kinds of misunderstandings endemic to outsiders. I hope I can walk a path closer to the advantages than to the disadvantages of that vantage point, about which you are, in any case, now forewarned.

Appreciation and Critique of Dr. Hamilton's Paper

In my reading, Dr. Hamilton's paper had as its central theme *his* commitment to find a way to make the secondary school useful to the student from a *"disadvantaged"* background. In places he was inventive. Throughout he was committed. Throughout he seemed to me sound, sensible, relevant, and adept in his use of the material he stressed.

I particularly liked his focus on *language* as facilitator of good thinking, as indicator of level of thinking, and as prime means whereby good thinkers try to draw less good thinkers towards better thinking.

I rather respected (despite mixed feelings) his decision to include as a "good thing" the fact that adolescents get a chance in high school to learn "the dire consequences" of not finding a way to live and work acceptably and "acceptingly" within formal organizations. As he noted, there are some who don't view that altogether as a "good thing." I'm certainly such a someone. In fact on first reading I had the irreverent thought that one learns that same sort of thing in jail also, perhaps even "better." But that's not a sufficiently serious response. A better response is: Alas, he's very right. I respect his inclusion of the point. Some of us who respond particularly warmly to the more spirited and irreverent qualities of adolescence are at risk for missing some of the less welcome truths, for example, the truth that a key psychological task of the second decade is finding some way to tame, moderate and civilize those qualities, at least enough to "get by." Score one for Hamilton.

I liked his emphasis on Dewey's theme that the influence of the environment depends not only on its objective characteristics but on what each person (actively, from within) makes of it. However, I would be critical that Hamilton, in the development of his ideas in the remainder of the paper, did not give to that theme the stress I would have given it and which I think it deserves. I don't think he takes his own point (or Dewey's) seriously enough as he moves ahead to develop his own perspectives. Instead he essentially drops it, to stress in

its place a theme from Bronfenbrenner, who is clearly a major intellectual influence on his stance and view. This other theme holds that the effect of any one factor--in this case school--is likely to depend upon and be markedly altered by the simultaneous action of other factors--in this case social class and race (which I'd call "subculture" since that seems to me the more operational element) and family. This "interactionist" stress is central in the paper. It is a powerful, valid truth. I do, however, think that he makes too much of it, and I do think that the more important action is elsewhere. But at this point, without strain, I want to speak of it as a valid partial truth, and one upon which a scholar is certainly entitled to concentrate his attention.

As noted earlier, I liked his stress on the whole range of ways in which social class and racial (subcultural) circumstances can interact with (hinder, obliterate) the good influences that schools might otherwise have on some adolescents. In particular I liked his references to the work of Ogbu, to which he directed me in an exchange of letters before the conference and with which I familiarized myself. I found that work to be thoughtful, valid, relevant, ingenious, inventive, engaging (e.g., the concept of job ceiling in particular, and the spreading ramifications of that "given" anticipation) and well used by Hamilton--though, as you will see later, I myself want to be an advocate for a focus quite elsewhere.

I liked his stress on the theme that "development is enhanced by progressively greater challenge when that challenge does not exceed the support available," and the related Bronfenbrenner quote that "Development is enhanced by a delicate balance between sameness and difference in the settings a person inhabits." That directs our attention to what I like to call "the cutting edge," the area where things are happening, the area (to use Piagetian language) where accommodation is assimilating, where assimilation is accommodating. That is *not* the area where familiar schemata are being replayed simply for the consoling but nonproductive pleasure of doing again what one can already do quite well. That is *not* the area so far outside and beyond one's "ken" and "reach" that one is unaware, aversive or intimidated in reaction to it. It is instead the critically important *intermediate* zone between those two areas in which the most productive encounters and advances take place. It is the zone Mosher has in mind in his paper when he speaks of "the wisdom of meeting adolescents in their zone of next development"--and I'd add, the knack and the intuition and the flexibility to be able to meet them *there*, because it isn't a well defined "place" of course, but is different from kid to kid, from moment to moment, from one part function to another.

I liked his interest in those exceptional individuals, such as Claude Brown, from backgrounds ordinarily damaging to school performance who in fact do very well. I myself had the unusual experience of working in the Bronx High School of Science and doing

some informal studies of their "Discovery Program" (involving mostly black and Puerto Rican youngsters, who were judged by their junior high school teachers to be inherently talented at science, and were admitted on that basis, even though their scores alone on the competitive entrance exam would not ordinarily have gained them admission). In the program I saw many youngsters of the sort that Hamilton has in mind. I had the impression that they were a diverse group, including: a) some youngsters of such high inborn talent that it seemed to shine through *regardless* of the damage done by the environment (which was probably plenty, but overridden by exceptional "spare capacity"), b) some youngsters who were somehow defined by the family (and even by the community) as the "good boy" or the "good girl" in a family that generated plenty of others who were in jail and in bad trouble, and who accepted and lived within that definition of themselves, walking "within a clearing" under an assigned "halo," and c) some youngsters (the most frequently seen picture, I thought) where the key determining element seemed to have been *a capacity on the part of the child growing up to connect with good people outside the family.* Such kids were usually the *only* kids in their families not in trouble. Thus "strong families in their backgrounds" often may not be the most frequent decisive element for kids from the ghetto who "make it." I would want to explore possible connections between these kids and the growing literature in psychiatry on the well siblings of mentally ill children (and adolescents). That literature suggests that *these are youngsters who somehow manage actively and selectively to reach out and get what they need* (by way of nurturance, encouragement, strength, "connections," models, supplies) *from someone* (e.g., uncle, aunt, neighbor, teacher, minister, storekeeper, etc.) *outside* the pathogenic core family process from which the ill sibling was unable to shield himself/herself. That may also be more important in the ghetto than "strong families in the background" (though that latter determinant may also play a role in *some* other cases).

I particularly liked the Bronfenbrenner quotes that development is enhanced when kids interact with other persons who are "more mature or experienced" than they are, and when they are engaged by those people in "responsible task oriented activities outside the home." That stresses the interaction between adolescents and adults (and also more mature adolescents) which is a theme I will want to develop further in my own response to the question we are asked to address, to which I wish now to return.

A Re-Statement and a Re-Framing of the Question We Are Asked to Address

The question was: "In what critical ways does the secondary school differ from other environments such as home, work, and peer group in its potential for influencing adolescent development?" I am not satisfied with the interpretation that Dr. Hamilton has given

to the question. I want to go back to it again, and to make a fresh start, reframing it, addressing myself to what I thought it was *intended* to get us thinking about. That will lead to and imply quite a different set of emphases and lines of thought than the ones drawn out of the question by Hamilton. I will then develop those just a bit, to establish at least some of the broad outlines of that different point of view.

For me the key elements in that question are brought out by reframing and expanding it as follows: What are the aspects of *psychological* development upon which the experience of *being in a high school setting* can have some special *incremental* good effect by *contrast or comparison with the other main influences* on psychological development in adolescence, notably: family, peer group, and sub-cultural surround?

For me that means that the first question has to be: "*What are the principal issues in adolescent development?*," from which we will want to be picking out those particularly open to influence by the high school. One approach to an answer would be to list what would be called "the psychological tasks of adolescence," which goes something like the following:

1) mastery of aggression: finding some optimal middle road between overcontrol and undercontrol, finding socially acceptable and effective ways of using, taming, moderating and directing the aggressive forces from within.

2) mastery of sexuality: again, finding a middle road between overcontrol and undercontrol; again, finding ways that are socially acceptable and personally gratifying.

3) mastery of dependency-independency issues in relation to family and to peer group: finding a way to be both autonomous and "connected," to both family and peer group, and "playing that" sufficiently well so as to be able to "be most truly oneself" and at the same time to get the good things that one can draw and that one still needs from connectedness to family and peer group.

4) mastery of self esteem issues: finding some middle road between the various forms of grandiosity on the one hand and self-depreciation on the other; finding some way to continue to feel "special" in some senses (as most children get to feel to some very considerable degree in the average "good enough" family) while yet absorbing and integrating increasingly unprotected exposure to the fact that the "outside world" doesn't feel that way about you at all.

5) development of a sense of identity: achieving the sense of one's self as a relatively coherent, relatively unique "package" that one recognizes from within and that others recognize from without as being "a certain particular sort of a person."

6) learning to think well: having some effective level of mastery of the forms of thinking (abstract thought, formal stage, hypothetical-deductive thinking) characteristic of good thinking in adolescence and adulthood, and having some effective level of mastery of the forms of language and logic that go with thinking well and effectively.

7) achievement of some effective level of mastery of some of the special skills, like artistic, athletic, musical, dancing, mechanical, mathematical, literary skills, which can emerge so strongly in adolescence (sometimes becoming central themes for career, or for lifelong sustaining pleasures), and which can be much more difficult to begin seriously later on in life.

In which of those does the high school potentially have a special role to play, as compared with family, peer group, etc.? In my view, primarily on matters pertaining to *the use of the mind*, the last two entries on the list. All the other entries are important in life, of course. But if you ask: "Where does the *secondary school* have something *special* to offer?" then for me the features of psychological development that zoom to the top of the list become those having to do with *the use of the mind*. The high school is a place within which we bring together *adult and adolescent* in a process that ought to be directed primarily at fostering interactions intended and designed to facilitate the development of more advanced forms of *thinking*. That is the special province of the school, and it should be, in my view, *top*.

The high school should be arena, theatre, interface and container within which adult and asolescent can interact around words and ideas, in ways that can have the form of a good conversation, a good show, a good fight, or perhaps most fundamentally: a good *dialogue*. By "dialogue" I mean the kind of verbal interchange within which two parties truly listen to each other and speak in sequence, each in unfolding patterns that contain, reflect and respond to the prior words and ideas of the other, with each "back and forth" trying to add something new from one's own point of view. In a dialogue each feels heard and each adds something to a unique, unpredictable, unfolding pattern created on the spot by two. That concept of "dialogue," so defined, is coming to be seen as a useful metaphor and concept in modern work on a diverse range of subjects including language acquisition, cognitive development, parenting and therapy.

It can serve us well here also in thinking about education in the high school.

Note that I stress the interaction of adolescents *with adults*. From adults, adolescents ought to be able to learn something--about the world, about thinking, about life, about ideas, about themselves. I am talking here about adults who *can* interact with adolescents verbally (and emotionally) at a high level of flexibility, depth, comfort and mastery as regards some of the more important matters in thinking, being and living. (Of course that can happen also between adolescents and other adolescents, especially older and/or "wiser" adolescents. But I am stressing the interactions with *adults* because that's how we set it up institutionally. It is adults who are supposed to, reasonably enough, "do the job" of educating the young.)

What does the high school have to offer in this connection that family and peer group don't offer equally well? It (potentially) exposes the adolescent to *other kinds of people* than those the adolescent meets at home or in the peer group. It (potentially) exposes the adolescent to adults (and other adolescents) who *broaden* the adolescent's spectrum of experiences and interactions with others. And it should also be able to expose the adolescent to adults (and some adolescents) who are *better (in some respects)* than the adults and adolescents in the family and peer group. I mean *better at something* (not everything). Better at thinking well, or writing well, or knowing something well. Better at doing some things well.

A further critical advantage that the school has (over family and peer group) is that in the school adolescents and adults can come together with much *less* of that very special emotionally "charged" quality that so very much characterizes and almost defines interactions with the family and the peer group. That quality can most definitely greatly complicate and interfere with useful, effective, comfortable *learning*. Learning is rarely "neutral" when it is the parent doing the teaching. (A fine example: On the first day of her skiing career I tried to teach my nine year old daughter a few simple and useful manuevers. All we managed to carry off was one long series of frantic flopping around and falling maneuvers accompanied by angry wails of "I can't, Daddeeeee!" Then my Swiss friend quite matter-of-factly eased his way over and told her *exactly the same damn things* I had been telling her. Suddenly it all became very very possible. And she was doing it.) What it is possible to achieve in the schools and much more difficult to achieve in family or peer group is an interaction that has a very special quality of "neutrality" which is potentially enormously useful for creating and generating the sort of productive interactions between people and minds that lead on to change, development, progress and growth at a wide variety of levels in the psychological domain. (Note: by neutrality I don't mean blandness. The kinds of interacting I have in mind here can be

very intense. What they are relatively *free of* are the *special* qualities that complicate learning in family and peer group.)

In the high school the interactions I am stressing should be around ideas, world view, depth of character, the deeper issues in life and living. They should require the use of the mind in thinking about the thought universe, the physical universe, and the man-made universe of culture, art, literature, language, philosophy, ethics, etc. They should also include discussion of the issues of psychological development themselves.

In such interactions around such issues, we have between adolescent and adult the possibility of the mutative encounter with the great teacher, the fateful encounter with an idea, the encounter of the adolescent with the adult that the adolescent never forgets. Forever remembered because it comes at just the right time to be "the first time I ever thought of it that way" in a fateful encounter of a sort that most of us can recall from our own adolescence and young adulthood, encounters that can "light up the day" and remain forever in the mind.

Although I am sure that it is already obvious, I wish to underlie and to make quite explicit the key emphasis in my presentation and in the point of view for which I am intending here to be a voice and an advocate: I think the primary purpose of the *schools* should be for interaction between adolescents and adults around issues having to do with the *use of the mind.*

I am intending to stress the role of the school as *the* social institution *most* appropriately assigned the focal role of striving to optimize the development of *thinking* in adolescence--of *excellence* in thinking--of optimal development of the *higher* mental functions. I do *not* intend that my emphasis on excellence of thinking should be read as emphasis on an unreachable ideal. I mean it in the same way that *real* excellence is part of the real experience of the high school age athlete or musician (direct observation of local "best of the best," observation on TV or records of the *best* professionals). I'm talking about *exposure to* and *interaction with excellence as a basic critical ingredient* in the process of learning to do anything well by anyone, adolescents certainly included.

In summary, I see the schools as places within which the heart of the enterprise should be interactions between adults (called teachers) and adolescents (called students) around ideas, around issues relating to the use of the mind in coming to terms with and engaging the world "out there"--the physical universe, the cultural and ideational universe--and the world "in there"--the psychological universe. The tone of the interaction should be intense (i.e., not tepid or overly controlled) but "neutralized" (i.e., relatively free of the special emotional qualities that characterize the

interaction between parents and children in families). The adults should be people who are *good* at thinking, from whom the adolescent *can* learn to think well, through a process of identification and modeling.

Having reframed the question, I now want to ask myself: Do the schools work that way?

I'll end up giving two answers: a radical one which will be harsh, bleak and pessimistic (and which I most truly think is correct, but around which I think it would be virtually impossible to rally any extensive support, in this setting or in any other--which is ok--I'm not complaining) and a more moderate one (around which it may indeed be possible to rally some useful support and forward movement, which is probably what I ought to be trying for, even if it means abandoning "pure truth").

The Radical View

I think that what I have described goes on very little in actual high schools. It does definitely happen between a few teachers and a few students and when it does happen it is marvelous. But most of what goes on in a high school isn't that way at all. I don't claim to be proving that, nor do I plan to set out to prove it. I only state it as an observation, which I do very much think of as a valid observation and which no one (including high school teachers, or the participants at this conference) has ever seriously differed with when I've made the assertion (as long as I allow that there is a small steady stream of exceptions, which there certainly is). I do wish to take a moment to wonder out loud why it is that way, and to express some opinions about the root causes.

In my opinion the root causes are partly a tradition of the high school in that direction, and partly a consequence of the kind of people who end up working as high school teachers. Here I am very much in agreement with Edgar Friedenberg (1959) whose commentary on the high school still seems to me to be right on target and never to have been said any better. People who are really good at thinking do *not* tend to become high school teachers. One certainly does not want the best and the brightest of one's own children to become a high school teacher! If a person with a good and active mind aspired to become a high school teacher one *would* wonder why he or she would want to be shooting so low. And one would be right to so wonder. I'm not intending here to be mounting any sort of a diatribe against high school teachers as a group. And there certainly are exceptions among them. Of course, as a group high school teachers are as full of ordinary human virtues as any group, and maybe even more so than some. But in terms of the quality of their minds and their real absorption in the life of the mind they tend to be a rather pedestrian and

lackluster group--hardly the sort of people likely to catch up young people even temporarily in real use and exercise of the mind, let alone to "turn them on" enduringly to a "life of the mind." Mostly they are people who have learned something and "just go through it," ("again and again") in a way that soon becomes "just a job," which is what the work experience eventually becomes for a sadly high proportion of average adults. For some jobs, this is all right. If for the postman delivery of the mail has become a routine job long since stripped of any interest, that creates no large problem for the recipient of the mail. But it does present *big* problems when teaching gets like that, and especially for adolescents, who are at a point in the life cycle particularly responsive to "authenticity" and "aliveness" and particularly intolerant of falsity and routine. Children respond to warmth and mostly need information. Adults are more courteous of failings and more tolerant of routine. Adolescents respond best to a vital person honestly doing something well, like a masterful engaged musician, or athlete, or thinker, or speaker, or teacher--really "*good* at it" and really "*into* it."

I could perhaps more readily convey a central feature of the difficulty I am stressing by using a diagram. Consider a classic bell shaped curve, the horizontal axis divided into three groups: a *broad* middle group centering on the "average," a smaller "upper" group including say the "top" 10% or 20%, and a similar "lower" group. I purposely leave the axes loosely defined. The horizontal axis could as easily stand for general level of excellence in the use of the mind, commitment to use of the mind, complexity of world view, depth of thought, or complexity or depth of character. The vertical axis refers to some rating (not specified) of "score" or "achievement" or "level of functioning." In my view teachers *cluster very much around the middle* of that curve, in general. However, the adolescents in the school spread out across *the whole range* of the distribution. I think the teachers do best (and quite well, in general) by the youngsters who are similar to them--the youngsters who also cluster around the middle of the curve. (One could take an even more critical view, saying that the "average youngster" could be served better by his/her educators. Of course there is some truth to that also, but that is not the truth I am choosing to stress at this moment.) I think that teachers do *very* badly in general by the kids at the lower end of the spectrum. (I hasten to emphasize that those kids are "*lower*" in *some* senses only. Call it "conventional academic skills." But I do want to *stay with that definition of them* as *deficient in some important respects*, regardless of cause, and apart from their other virtues and potentials which are of course very real, and of central importance for trying to help those youngsters.) Hamilton's focus on the "deficient" student is a legitimate focus. It certainly has been *the* major focus of much important work done in our time, and it has been a major focus of my own at some points in my career

and work. But my own stress right now is on the failed interaction between teachers and kids at the *upper end of the spectrum*. I mean the kids who are good, very good and very, very good at their school work. Between them ("they" are "us", of course, when *we* were adolescents, because this is the group that includes most of those kids who grow up to become professionals, scholars and mindworkers as adults) and the teachers in the secondary school there is a serious mismatch at (commonly) *two* levels: 1) A mismatch of *skill* in using the mind--a mismatch between relative ordinariness and varying degrees of goodness/excellence, and 2) a mismatch in *cognitive style*, since most teachers work within a cognitive style that is strongly tipped towards the most "convergent", structured, "tight", conventional modes of thought whereas the cognitive styles of bright students tend to be distributed across a spectrum varying from that (legitimate) pole at the one extreme to a strongly contrasting pole at the other extreme of much more "divergent", loosely, complexly, "freely" structured modes of thought (see the work of Getzels and Jackson (1962) and Hudson (1966) on this point) that are *not* so familiar to and comfortable for "your average high school teacher."

My stress on the failure of the schools to serve the upper end of the spectrum may seem wrongheaded to some. It certainly is wide open to being characterized as elitist. It certainly is elitist--if the term is taken to mean an advocacy stance "looking out for" the special interests of the inherently talented and interested young thinker. But if the term is used as an automatic dismissal, as is alas all too common in the aftermath of the sixties, then against that I offer the following line of thought as defense and explication. Consider the metaphor, offered only half whimsically, of the school as a tennis court. If you are a serious tennis player who plays reasonably well and you find yourself waiting for a court occupied (interminably, it always seems) by people who are having just a lovely time sort of blooping the ball all over the place and sometimes even over the net, inevitably you are likely to find yourself having to grapple with some version of the thought: "What *are* these people doing here? Somehow it *isn't quite playing tennis*!" even though they are obviously having a lovely, cheery time with it. And you even begin to wonder: "Is it right that a *real* tennis player should have to wait for a court in favor of someone who isn't really playing tennis?" And if on top of that you were suddenly confronted with a group riding bicycles around the court (or I could make the same point even more strongly by saying motorcycles) would it not be understandable (even inevitable, even a kind of serious omission not to do so) to find yourself thinking, and even saying: "Hey, these people *aren't* playing tennis. These *are TENNIS courts*, damn it! And tennis courts are *my* turf! *Because I play tennis.*" *That* is how I feel about schools. They are *my* turf. And the turf of other people who have good minds and actively use them and want to interact with others who do. But there are a lot of people in there just blooping the ball. What's worse, some of them are

identified as *teachers* of tennis. And it doesn't really make it any better that most are decent people who are doing as well as they can, and who truly feel they are doing right. Not to mention that the whole situation is yet further complicated by the fact that there are a lot of people (primarily adolescents) completely un-engaged by the process of education (for whatever set of reasons) riding motorcycles around on these "courts," bending them to another (mostly Bacchanalian) purpose altogether.

In my view (my radical view) it will never be better. Unless there is a major change. Of tradition and personnel. But that won't happen. It *can't* happen. I feel about as hopeful of any such change as I do of getting truly first class cooking in the average hotel dining room in the average small town in America, and for essentially the same reasons. Chefs who are serious about cooking don't aspire to work there. Because there isn't enough demand for good cooking from the customers. Or the money to pay for it. And there aren't enough good cooks anyway to provide one for every hotel in every hamlet, village or town. It's the same way with the schools. Well, if you can't turn the schools into places where adolescents can encounter and interact with adults who have good minds, what then? Well, my radical answer would be: It doesn't much matter. If you can't, then it isn't school. And then the institution could as well be pressed into a whole variety of other purposes. But I just wouldn't be much interested. I see schools as relating to the use of the mind in the same way that music schools relate to music. If one were serious about music, and had to watch music schools being pressed into some useful purpose other than music education because there weren't enough good musicians around to make them into real music schools, one would have essentially the same feelings that I do about the high schools if they can't make them into good training grounds for good thinking. "Good luck to them" whatever else they choose to do with the building and the time and the kids, but if it ain't thinking they're into, I'll "see ya later."

A Moderate View

If, however, one accepts that the cast of characters is as it is (and will undoubtedly continue to be, unless there are the sort of major social changes that might make the high schools a sought-after haven for bright people who wouldn't ordinarily aspire to the role of high school teacher, such as occurred temporarily during the Viet Nam War) and if one accepts the general tradition of the place, and if one simply aspires to the modest goal of *some* improvement, rather in the spirit of good medical work with patients who suffer from a chronic illness which sets a serious upper limit to functioning, but *within which* limit one seeks to maximize functioning, then my thoughts turn primarily towards the following:

1) We should try to find *issues*, around which to try to engage teachers and adolescents in a serious dialogue. Those issues should be among the deep and important issues in living which can engage and exercise the best capacities of mind, *and* should also be issues that "people like high school teachers" can do well with. One should be choosing out of the larger set of deep and important issues in living some subset that "people like high school teachers" are likely to be able to handle best. In my view the currently popular (even faddish) Kohlberg-influenced work on moral development is a "reach" in the right direction. (I am, however, not reassured when I hear how some of these exchanges actually develop in real schools in the hands of real teachers. They do tend to tip over, distressingly often, into becoming familiar, old-fashioned, conventional exercises in "moralizing" a bit too easily. But the intention, to focus on the cognitive element in moral problems, is a worthwhile "reach").

   The themes I myself tend to think of as good possibilities hover around issues like Fairness, Decency, and Empathy. Those *are* all deep issues. *And* in addition I think they are issues that "people like high school teachers" are often quite "at home" with. These are issues organized around "common humanity." They are deep, they can support interchange at middling levels, *and* they can be carried to high levels by teachers and kids capable of doing so.

2) I'd support the encouragement in the schools of a wide variety of forms of *Group Process* (small groups, large groups, mixed groups, focussed groups, all kinds of groups) in the hands of group leaders (perhaps from inside the school, mostly from *outside* the school) *who are good at* (and who are pointedly *trying for*) a stance that *WILL BRING OUT THE BEST* in the people already in place in the high school, particularly among the teachers, but among the kids as well.

   I'm intending there to stress the degree to which it *can be a difference that can make a difference* to introduce an element into a system that *BRINGS OUT THE BEST* in the people who are *already there*, (by comparison with having no such added element, in which case people tend to function at some middling level within their range of capacities, and not infrequently to dip down to their very worst). If one can't change the people or their total range, at least one ought to do what one can do to help them to function at or near their best, mostly by benign encouragement, support and modeling. This is work that *can* be done well by good group leaders, who can set a tone that draws people towards

their best. If the group leaders are also key administrators in the school, that's optimal. But it can be quite good enough if they are from outside the school but are definitely *supported* by key administrators and teachers from within the school.

In summary, then, I see the high school as an arena for the potentially fateful encounter between adolescent and adult, around issues having to do with the human mind functioning at or near its best, confronting deep and complex matters in the physical universe, in the world of culture, in the world of ideas, in the psychological universe, in the human condition. I am stressing the need for young people to have *models of excellence* in the use of the mind in such confrontations. I am stressing the element of *identification* as a key component in the process whereby a young person gets caught up in pleasure, excitement and a sense of the possibilities inherent in good use of the mind. I am stressing the need for adolescents to encounter adults who *can* broaden the range and raise the level of excellence they experience beyond that which they can get from their own families and peer groups. I have in mind interactions which may be (and commonly are) intense but which are "neutralized" compared to the very special personal "charged quality" that is so intrinsic to the interactions within families (and I mean normal comfortable good families, as well as troubled families). I am stressing an interchange that includes both very definite statements and points of view set down by the adult ("thesis," so to speak) but which leaves plenty of room for (and truly encourages) quite independent responses from adolescents ("antithesis") out of which, in the process of flexible dialogue and disputation (often heated, but always *centering* on *thinking*), there can emerge the elaboration of a whole network of syntheses and possibilities. The goal of this process is partially those syntheses, but even more important, it is the exercise and the development of the capacity to think, and to think well.

My own (most harsh) view of the matter is that that will never become a regular thing in "your average high school." The tradition of the high schools is against it and the people who dominate and are most numerous there can't function at that level. And I think that there is little reason to think that that will ever change. Except under very special circumstances in very special places at very special times. And if it doesn't happen, here's one person who doesn't much care what other thing they do with the buildings and the time. As long as it serves *some* useful purpose, for kids especially.

But if one tries to "make the best" of what one has there, it would probably be a step in the right direction to try to encourage mind-to-mind interactions between adolescents and teachers around those deeper issues with which "poeple who become high school teachers" are truly comfortable. I would nominate for consideration issues such as Fairness, Decency, Empathy, (the latter of which is, I believe, already being explored as a curriculum issue by Dr. Sprinthall, who is

a key participant in this conference). I think "people who become high school teachers" probably wouldn't do too badly with issues like that, with some help.

And in addition I would urge the development of a wide variety of forms of group process in the schools as a good format within which skillful, trained and talented group leaders (from inside or outside the school) can have a real effect at *BRINGING OUT THE BEST* among the real people (teachers and adolescents) who come together in high schools with at least *some* basic wish to "do right." Skillful group work, strongly supported "from the top," done primarily with groups of teachers, in a spirit that is partially "how-to-do-it" but with plenty of modelling, some "challenge," lots of support, and even a willingness to find a way to be "inspirational" where that comes naturally, is one good way of introducing a difference that can make a difference. People who can do that kind of work well do exist, and in sufficient numbers to make a difference. The initiative, however, would have to come from within the school system, to recruit such people and to bring them into the school, and to support them in the work while they are there. Would the school system do that on its own? Probably not. But they might if they were encouraged to do so by influential and active educational psychologists, well placed and working to influence the schools in a right direction. Here's one voice saying that that is a very right direction, and encouraging you to do that kind of encouraging. I think it is one difference that *could* make a difference.

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TO FACILITATE OR IMPEDE?
THE IMPACT OF SELECTED ORGANIZATIONAL FEATURES OF SECONDARY SCHOOLS ON ADOLESCENT DEVELOPMENT

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Educational Research and Development

It is commonly acknowledged that a central purpose of secondary schools is to facilitate students' development from the status of children to that of adults. Although organizational features of schools and classrooms that affect student social relationships have been examined (e.g., Bidwell, 1965, 1970, 1972; Boocock, 1973; Bossert, 1979; Johnson, Johnson, & Scott, 1978; Schmuck, 1978, 1980; Waller, 1932), and various dimensions of adolescent development explicated (e.g., Adelson, 1980; Adams, 1976; Erikson, 1968; Kohlberg & Gilligan, 1971), with one noteworthy exception (Mosher, 1979), there have been relatively few attempts to consider explicitly the impact of the organizational features of secondary schools on adolescent development.

In the following pages, I will bring together several currents of psychological research and theory and examine how the process of adolescent development might be affected by the social context of secondary schools. I begin by describing several assumptions which have guided my thinking about adolescent growth and development. I then discuss four major dimensions of development which are especially important during adolescence,[1] and hypothesize the manner in which individuals' school experience may facilitate or impede development along these dimensions. Finally, I examine how certain organizational features of secondary schools seem to affect the daily experience of students and, in turn, facilitate or impede such growth.

Although the following discussion encompasses what I believe to be major theoretical and experiential dimensions of adolescent growth, the treatment of the organizational features of secondary schools is more idiosyncratic. I have not sought to give a complete description

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[1] In this paper I use the words "growth" and "development" synonomously.

of the structural characteristics of secondary schools; instead, I consider those organizational features which appear to have the greatest impact on adolescents' social, psychological, and cognitive development.

Guiding Assumptions

A number of assumptions about the nature and importance of adolescent development have guided this essay; I wish to make them explicit before proceeding.

First, the process of development from infancy to adulthood is characterized by the expansion of individuals' capabilities for action, thought, and social relationships. As the dictionary would have it, individuals "evolve the possibilities" of human existence. Development during adolescence, like development during other identifiable periods (e.g., infancy, early childhood), has a specific functional significance in this expansionary process; continued development as an adult is dependent on successful completion of the adolescent period.

The assumption that the contours of adolescent experience can constrain or facilitate adult development is central to most psychologists' discussions of adolescence, including Erikson's vastly influential writings (e.g., 1959, 1968, 1979). Several empirical studies (Bachman, O'Mally, & Johnson, 1978; Kelly, 1979; Moriarty & Toussieng, 1976; and Vaillant, 1977) which set out to examine the functional significance of adolescence in the life cycle were reviewed by Newman who concluded:

> First, adolescence may well be a period for the consolidation of one's coping style. Second, the articulation of a lifestyle in young adulthood appears to be heavily dependent on competencies, aspirations & life choices developed in adolescence. Third, the extent to which maturation continues through adulthood may reflect on the ability to experiment and encounter conflict in adolescence (1979, p. 260).

Attention to the impact of secondary schools on adolescent experience, then, implies a concern not only with improving the quality of adolescent life in itself, but also with facilitating optimal preparation for continued psychological growth. Because of the assumed importance of the "preparatory" nature of adolescent experience, the following discussion is focused on the "ideal type potential" of the adolescent experience to foster continued human development (cf. Kohlberg & Gilligan, 1971, p. 1055), rather than the "normative response to adolescence" chronicled by Douvan and Adelson (1966).

Second, development proceeds as a result of individuals' interactions with their environments. Whether one is concerned with the development of the structural competencies of thought, the formation

of intimate social relationships, or the more mysterious alignments of individual identity, development occurs as individuals obtain information, interpret it, and act within their physical and social environments. Development, to use the Piagetian metaphor, represents equilibration of individuals' successive accommodations to and assimilation of their environments.

Third, although various psychological theories use different explanatory frameworks to describe the processes and subprocesses of adolescent growth, there is relative agreement among developmental psychologists concerning the dimensions along which individuals must mature if they are to become optimally functioning adults. Development is normative; it is directed toward the attainment of explicit psychological goals.

Fourth, although there is relative agreement among Western psychologists concerning the goals appropriate to adolescent development, different cultures and subcultures may conceive of different goals or value differentially certain developmental attainments and dimensions. In the end, we all are confronted with personal and cultural commitments to our own preferred "bag of virtues" (Kohlberg & Mayer, 1972), a point emphasized by Metz in her response to this paper. This should be borne in mind when discussing adolescent development in different cultures and subcultures.

Dimensions of Development

Development can be thought of as a fabric woven of individual conceptual strands. When observed from a customary distance, the fabric blends together into an interdependent mass of observed behavior and reported perceptions. When subjected to scrutiny, however, more or less conceptually distinct strands of development can be discerned. In the next section I will inspect four strands of development which have particular significance during the adolescent years: 1) cognitive skills; 2) identity; 3) relatedness; and 4) autonomy. Although discussed separately out of expository necessity, these developmental strands are not independent, but rather penetrate and influence each other.

The Development of Cognitive Skills

The growth of cognitive skills plays a crucial role in the totality of adolescent development for two reasons. First, certain reflective and analytic capacities are required for adolescents to recognize their own identities, interpret the obligations and opportunities inherent in social relationships, and understand necessary limitations to their own autonomous expression. An increased ability to process personal, social, environmental, and historical information thus nurtures growth along other developmental dimensions. In addition, sophisticated information processing skills are necessary if individuals are to understand and

respond appropriately to the practical, theoretical, and social challenges of daily life. The ability to employ complex cognitive skills, then, also represents an important outcome of adolescent growth.

Although adolescents remain concerned with pragmatic issues and engage in the same sorts of cognitive operations which characterize concrete operational thought, they have the potential to learn to consider the possibilities of existence and the external philosophical questions which have always plagued human experience. During adolescence the perception of reality may become "secondary to possibility" (Inhelder & Piaget, 1958, p. 251). With newly developed capabilities of thought, adolescents are able to formulate sophisticated plans and strategies to deal with the future.

Although developmentalists often describe the attainment of formal operational thought as being characteristic of adolescent growth, a number of researchers have questioned how many adolescents actually demonstrate the ability to use it. Using the traditional Piagetian assessment tasks, they have reported that approximately 50 percent of their adolescent and adult samples were unable to demonstrate the characteristics of full formal operational thought as defined by Inhelder and Piaget (Dulit, 1979; Keating, 1980; King, 1977; Kuhn, Langer, Kohlberg, & Haan, 1977; Neimark, 1975). Such widespread inability to use propositional logic suggests that the development of formal operational thought is highly dependent upon the environmental opportunities which are available to practice such thinking. Research has documented that the emergence of demonstrated formal operational capabilities is associated with distinct types of previous social and cultural experience and is quite susceptible to training (Gallagher & Noppe, 1976, p. 212; Keating, 1980, p. 237). This suggests that the cognitive demands present within adolescents' school environments may have a crucial effect on the development of sophisticated information processing skills. To draw on Flavell's oft-quoted distinction (1977), the capability for reflective, abstract thought may come into existence during adolescence, but will not be utilized unless there is a need for it.

Attainment of cognitive maturity in adolescence requires demonstration of the sophisticated thinking strategies necessary to examine abstract philosophical and theoretical questions, and may be exemplified as a "Stage 4" or "Systems" understanding of the nature of oneself, one's friends, parents, reference groups, and the moral order of the larger society (Gibbs, 1979). This level of cognitive development reflects the systemization of earlier cognitive capacities and the development of second order thinking processes which enable the adolescent:

> "to form a viable society, real or hypothetical," and appreciate the relation between individual and society . . . in terms of social functions and practices (Gibbs, 1979, p. 102).

The Development of Identity

Identity is an elusive concept whose meaning, to borrow Wittgenstein's famous distinction (1973), is more easily "shown" than "said." Erik Erikson, whose influential writings have popularized the concept, often takes just such an evocative approach when writing about the experiential reality of "what identity feels like when you become aware of the fact that you do undoubtedly *have* one" (1968, p. 19). Here Erikson is quoting from a letter of William James to his wife.

> A man's character is discernible in the mental or moral attitude in which, when it came upon him, he felt himself most deeply and intensely active and alive. At such moments there is a voice inside which speaks and says: *"This* is the real me!"

James further comments that although the experience of a sense of identity is:

> . . . a mere mood or emotion to which I can give no form in words, [it] authenticates itself to me as the deepest principle of all active and theoretical determination which I possess. . . .

Attaining a sense of identity is important to developmental progress because it provides an explicit personal criterion to guide future decisions and actions. While the formation of identity begins long before adolescence, during adolescence social expectations and psychophysiological impulsions unite to prod the individual to develop a sense of self. Also, during adolescence individuals attain the cognitive and affective capabilities which enable them to synthesize past knowledge and affections with present experience, and project future possibilities (Douvan & Adelson, 1966; Marcia, 1980). The concept of identity thus provides a conceptual shorthand for individuals' unique integration and recognition of their "identifications, capacities, opportunities and ideals" (Douvan & Adelson, 1966, p. 15). The identities individuals construct during adolescence allow them to find psychological stability in the midst of social and physical change.

Just as the white line is most clearly visible against the black asphalt of the highway, individual identity is often most clearly recognized against and experienced within a social context. Identity formation forces individuals to lodge themselves "within a social reality that they understand" (Erikson, 1979, p. 143), and accept the assumptions, attitudes, and ideology of those who share that social reality. At the same time, it requires them to recognize groups and individuals as being different--or not identical.

Identity formation, however, involves more than the recognition and acceptance of group identifications. Various authors (e.g., Gibbs, 1979; Gilligan & Murphy, 1980; Kohlberg & Gilligan, 1971; Perry, 1968) have

written cogently about the existential ideals and commitments one may make as one attains formal operational capabilities of thought during adolescence. By committing oneself to a personal vision of the world, one fortifies the process of self-definition. To *define* oneself as an individual, according to the etymology of the word, is to fix the boundaries of one's self, and the actions that self will undertake. Such actions can involve occupational choices, engagement in social relationships, habits of dress and demeanor, aesthetic judgements, and moral and political expression.

My own study of the war resistance of high school and college men suggests that the establishment of the moral boundaries of the self is a powerful component of adolescent identity formation and that individuals' decisions about whether or not to take moral actions can be directly related to their perceptions of themselves as moral actors (Mergendoller, 1981). Consider, for example, the following excerpt from a letter written by Tim Southwood, one of the participants in the above study, who was sentenced to prison for willfully refusing induction. This excerpt presents Tim's response to his judge's questions about why Tim had not applied for Conscientious Objector status.

> A requirement [for CO status] is that I be against all wars, and I just can't make that statement. This is the only war I've been asked to fight in and this is the war I can't fight in . . . I don't know what I'd do in a different situation, but thinking of World War II makes me certain that there is such a thing as a just war for our country. . . .
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> So I don't feel that I can tell my draft board that I'm against all wars. I must admit that at times I've been tempted to be a CO and adjust my view so that I would be one, but if I ~~did that~~ what would I really be?

When I asked Tim how he felt as he interposed his sense of himself as a moral person against the demand of the Selective Service System to perform acts he considered immoral, his response was reminiscent of the words of William James with which we began this section.

> [I felt] a feeling of strength . . . strong in that I was facing up to it. I wasn't backing away from it; I wasn't being intimidated . . . I was just going through it, regardless of the consequences. [I] was getting a whole sense of my own strength as an individual, being able to stand by myself and not be intimidated.

Individuals recognize the nature of "their selves" and their "identities" through the reciprocal experiences of action and self-reflection, as well as through incorporating, without consciously examining, assessments of how much their own attributes and accomplishments are valued by others. Individuals' concepts of their identities, then, may be influenced by their experiences of self-expression, self-examination, and by the nature and quality of their social interactions.

Establishing an optimal development goal for the process of identity formation during adolescence is difficult. Identity consolidation and exploration neither begin nor end at adolescence, and formulating an "identity achieved" criterion as a developmental marker is inappropriate. A more useful guidepost may be found in the experiential stirrings of self-awareness, during which adolescents acknowledge and accept their individual distinctiveness as well as their resemblance to others, and come to value and accept this constellation of individual characteristics. I explicitly include as a part of this developmental goal the adolescent's recognition of positive self-worth and the implicit internalization of positive social values. Such a criterion of optimum identity formation thus excludes the attainment of anti-social or clinically pathological identities.

The Development of Relatedness

Gaining the ability to form mature friendships with members of one's own sex as well as with members of the opposite sex is a critical accomplishment of adolescence. Friendships facilitate the development of identity and self-understanding. Douvan and Adelson write:

> The particular advantage of adolescent friendship is that it offers a climate for growth and self-knowledge that the family is not equipped to offer, and that very few persons can provide for themselves. Friendship engages, discharges, cultivates and transforms the most acute passions of the adolescent period, and so allows the youngster to confront and master them. Because it carries so much of the burden of adolescent growth, friendship acquires a pertinence & intensity it has never had before nor (in many cases) will ever have again (1966, p. 174).

As a result of assessing their relationships with others, adolescents come to understand how they are similar to and different from their peers. Discussing personal philosophy and exploring shared and disputed ideas strengthen adolescents' interpretive frameworks and allow them to cognitively assess existential commitments.

The adolescent experience of close affiliation, however, is more than the handmaiden of identity formation. The attainment of intimate, caring associations is important in and of itself. Adolescent friendships

with members of the same and opposite sex provide young people with their first deep affective attachments outside the realm of the family. These relationships provide a training ground for adult relationships built on trust, mutual support, and honest self-expression and revelation.

Although empirical studies indicate that adolescent friendships among members of the same sex develop differently for boys and girls, and emphasize different socio-emotional issues during early, middle, and late adolescence (Coleman, 1980; Douvan & Adelson, 1966), common conditions for establishing friendship are necessary to all types of intimate relationships. These conditions include the opportunity for experiencing shared activities, thoughts, feelings, and the provision of reciprocal assistance in an environment of mutual trust.

Like identity, the developmental dimension of relatedness tends to be more evocative than operational. A developmental marker can be found in the attainment of natural and mature relationships in which both parties communicate ideas and feelings and reveal fears, hopes, and tentative visions of self and the world. Somewhat paradoxically, the experience of relatedness requires the cognitive ability to view dyadic interactions from an "objective" or "third person" point of view (Selman, 1980). At its most advanced level, it requires individuals to perceive that they are part of a larger whole and that at some level other individuals and cultures have significant commonalities (cf. Metz, 1980).

The Development of Autonomy

During adolescence, individuals gain the cognitive ability to foresee and the social opportunity to take increasing responsibility for their own lives and the consequences of their actions. Such abilities are linked to the exercise of autonomy. The word autonomy, as its etymology suggests, implies self-governance; autonomy requires that one make decisions and behave according to one's own vision of appropriate conduct. Without the opportunity for autonomous thought and action, adolescents may be prevented from breaking the childhood bonds of dependency or parents and family.

The development of autonomy is probably best fostered by allowing and encouraging adolescents to make increasingly significant decisions about the way in which they lead their current lives and prepare for future experience. Such decisions may best be wrestled with in a social context where individuals can discuss and debate alternative courses of action before taking them. In such a fashion, individuals exercise autonomy while they concurrently develop the ability to examine and justify projected courses of action.

Although it is often easy for adolescents to think and act as they see fit, such behavior, if not accompanied by an assessment of the impact of their behavior on others, may only present immature and egocentric self-assertion. In contrast, it is the actions which reflect both the

adolescent's emerging capacity to think independently, and which have been taken after consideration of their potential effect on others, which provide an appropriate developmental marker for autonomous self-expression.

The Impact of Secondary Schools on Adolescent Development

I have discussed above four developmental dimensions of maturation which are significant during adolescence because they facilitate continuing human growth throughout the life span. I assume that most adolescents will grow along these dimensions regardless of whether they attend secondary school, regardless of the particular organizational and environmental configuration of the school they do attend. However, since development occurs as a result of individuals' interactions with their environments, the nature and extent of that growth is affected to some degree by the nature of the environment. Adolescents inhabit schools approximately 1,400 hours a year; the impact of this social environment is of some consequence if we wish to maximize the possibility of maturation toward the criteria previously discussed.

I hypothesize that schools facilitate development if the daily experience of students encourages them to examine the nature of their physical and social worlds, to try out and utilize their nascent understandings of their identities, to form close affiliative bonds with others in the pursuit of common goals and the completion of common tasks, and to exercise their own capacities for planning and self-direction. In like manner, schools impede development if they confine student thought to the physically concrete and ethically mundane, obstruct adolescents from recognizing and examining their preferences, hopes, capabilities and distinctiveness, prevent the formation of social bonds cemented by common effort, and restrict self-directed actions and participatory governance.

Daily student experience in secondary schools, and thus the impact of secondary schools on adolescent development, will be greatly affected by three organizational features of schools: 1) the size of the school; 2) the nature of the student role within the school; and 3) the social organization of classroom experience. Each feature can facilitate or impede adolescent growth along the four dimensions of cognitive growth, identity, relatedness, and autonomy. In the following sections I consider each of these organizational features and reflect on how they affect the daily experience of students and, consequently, adolescent development.

The Impact of School Size on Adolescent Development

Secondary schools are complex organizations with varied opportunities for student participation and involvement. Using the concept of "behavior setting" to denote "organized assemblies of behavior episodes, physical objects, spaces and durations" (Barker & Gump, 1964, p. 19), Barker and his colleagues surveyed 13 Kansas schools with student popula-

tions ranging from 35 to 2,287. After determining that classroom activities comprised only 20 percent of the total number of behavior settings, they pointed to the preponderance of noninstructional behavior settings which "demand the time and attention of the students . . . [and] therefore contribute in some way or another to the schools' influence on students" (1964, p. 198). When Barker and Gump examined the proportion of high school juniors who participated in behavior settings of all types, they discovered that "the proportion of participants was 3 to 20 times as great in the small schools as in the largest school" (1964, p. 196). Although the largest school in their sample provided students with more varied "non-class behavior settings" when compared to the smaller schools, student participation in the small school behavior settings was deemed more significant and growth enhancing that participation in the large school settings.

> . . . the small school students participated in the same number and in more variations of the available settings, on the average, than the students of the large school. Furthermore, a much larger proportion of small school students held positions of authority in the behavior settings they entered and occupied these positions in more varieties of settings than the students of the large school (1964, p. 196).

Commenting on the results of this research as well as on several studies which have replicated and extended the original findings (e.g., Baird, 1969; Wicker, 1968; Willems, 1967), Gump noted:

> In terms of actual setting behavior, the small schools produced much more responsible or central position behavior than did the large school. Further, the setting satisfactions of the small school students emphasized gaining competence, meeting challenges, and gaining success in small group activity; large school students emphasized vicarious satisfactions and winning "points" for supporting certain extracurricular affairs (1980, p. 562).

The research of Gump and his colleagues compellingly demonstrates that school size is directly related to the percentage of students who participate in multiple and varied activities as well as the quality of these students' participation. I would argue that small schools facilitate cognitive development, identity formation, the establishment of multiple and diverse friendships, and autonomous self-expression because they encourage increased participation in extracurricular activities. Let us consider how such positive developmental processes might occur. First, participation in diverse and multiple activities may require students to take and reflect upon the taking of multiple social roles. Such activities, as many investigators have found, generally encourage the development of increasingly sophisticated levels of social perspective taking and sociomoral thought (Chandler, 1973; Higgins, 1980;

Johnson, 1975; Selman, 1980) as well as empathy and altruistic motivation (Hoffman, 1975).

In addition to encouraging cognitive development, identity formation should also be affected by increased participation in extracurricular activities. Such activities encourage students to try on and explore new self-conceptions and assess individual competencies. Students have expanded opportunities to practice the roles of leader and follower. They may confirm or discover preferences, passions, or new aspects of the self previously hidden from view, and thus facilitate the recognition and consolidation of identity.

Small schools induce increased student participation in varied activities because they are "undermanned," that is, "when too few persons are available to carry out the activities occurring in each behavior setting, strong and diverse forces press those few to carry out more varied and central tasks in the setting" (Gump, 1980, p. 561). Such forces are often experienced as invitations and entreaties from peers to join various activities so that the critical number of participants are available. The message implicit in such requests is that the invitee is valued for his or her ability to contribute to the common effort. A succession of messages that one is needed and is expected to contribute to group endeavors may have a significant impact on the adolescent's sense of identity and self-acceptance as a valued individual.

Small schools should also encourage friendship formation. Participation in varied activities requires maintaining interpersonal relationships and making firends with diverse individuals who would normally be disregarded. During the activity itself, mutual engagement in the accomplishment of common tasks can act as a springboard to the development of more intimate relationships. Finally, since extracurricular activities are less directly influenced by the directive power of college admission requirements and the necessity to rank and separate student accomplishment, there should be more latitude for the expression of student autonomy and the opportunity to plan, discuss, and carry out student-initiated projects.

In short, if we can assume that student engagement and satisfactions "related to challenge, activity and group affiliation" (Barker & Gump, 1964) are important facilitators of adolescent development, then we can assume that small schools support student participation in activities which encourage individual growth in ways which larger schools do not. Secondary schools should be, as Barker and Gump argue, "small enough that students are not redundant" (1964, p. 202).

The Impact of the Student Role on Adolescent Development

My starting point in this discussion is a conception of the typical secondary school as a complex social organization whose most important actors inhabit the hierarchical roles of administrator, teacher, and

student. Such organizations, as Charles Bidwell has remarked, demonstrate "a distinctive combination of bureaucracy and structural looseness" (1965, p. 1,012). As in any bureaucratic organization, those in higher status positions are given legitimate power to direct, sanction, and constrain the behavior of subordinates, and to require that they act according to established role definitions. Yet because of the relatively flexible and unsupervised way in which the assigned "work" of teachers and students is carried out, schools often provide room for maneuvering around formal role expectations. Moreover, much of the work of the school cum bureaucracy is carried out during interpresonal interactions, thus placing role definition at the mercy of situational construction and negotiation, and potentially opening the definition of the student role to unceasing debate.

The characteristic structural looseness of the school coupled with the ongoing, emergent quality of role negotiations results in a social order which is not fixed, and often rests on a fragile and uneasy equilibrium among role groups. This uneasy equilibrium can be made more vulnerable by the fact that students as a group have their own preoccupations and aspirations which are often greatly at variance with the official posture of the secondary school (Coleman, 1961, 1974; Waller, 1932). Should students perceive that their own interests and educational strivings are ignored by those entrusted with their education, they may respond with apathy, disruptive actions, or alienation (Bidwell, 1970; Newmann, 1980; Waller, 1932).

Students make up the most numerous role group in the school, an observation which has an important corollary. Extensive rules and control procedures are needed to regulate the movement and actions of the great crowd of bodies which move about the school and inhabit classrooms. Students have significant power to disrupt the school and sabotage the instructional process. Care must be taken to ensure that suitable decorum is maintained in order that the work of the school--teaching and learning--may continue.

Given the centralized administrative structure of most secondary schools, and the inescapable need to maintain social and physical order among a mass of adolescent spirit, one typical response of the school bureaucracy and its administrators is to narrowly delimit the student role, and foster among the student population the expectation that students will face swift retaliation for deviations from this circumscribed role (Metz, 1978). When such procedures are successful, students do not "get out of lin[illegible] administrative and curricular decisions flow smoothly, and a great [illegible]any students can be managed and instructed by relatively few t[illegible]achers and administrators.

The nature of the circumscribed "student role" has received extensive attention from educators and social psychologists (Bidwell, 1965; Blumenfeld, Hamilton, Bossert, Wessels, & Meece, forthcoming; Boocock, 1973; Farber, 1969; Jackson, 1968; Metz, 1978; Newmann, 1980; Waller, 1932). Students, it is generally agreed, occupy the lowest status in

the school hierarchy. They enter school involuntarily, and are only allowed to leave school (or terminate their studies) when given permission by those of higher status. They are formally disenfranchised, having little control over the teachers who will teach them, the course content they will pursue, the rules and regulations which they may be punished for disobeying, and the way in which they will learn the prescribed academic material. Boocock, among many others, has drawn attention to:

> . . . the passivity attached to the student role. The "good" student listens to the teacher, follows instructions, does not disturb the class by talking out of turn, and is otherwise receptive to *being taught* (1973, p. 24).

In short, secondary schools function as custodial institutions forcing students to remain dependent on their adult caretakers in "a protracted state of infantilization" (Friedenberg, 1963).

I would argue that the impact on adolescent development of the prolonged enactment of such a circumscribed role will vary depending upon the developmental dimension in question. When students are confined to the status of passive consumers of curriculum, this may impede students' social-cognitive development (Higgins, 1980). As a series of moral intervention studies indicate (Mosher, 1980), social-cognitive growth toward a "Stage 4: Systems" level (Gibbs, 1979) can be facilitated through active participation in a democratic and largely self-governing community. Summarizing the results of a decade of curriculum development, implementation, and evaluation, Mosher writes:

> . . . the most powerful moral education interventions involve discussions of real dilemmas in the context of a natural group . . . reasonable corollaries of discussing real situations in a natural group are the cultivation of democratic decision making, by giving to each participant a share in the decision and also the making of family or classroom contracts for implementing those decisions (1980, p. 103).

In perpetuating a student role definition which excludes students from the selection and management of their own academic program and social arrangements, secondary schools not only ignore adolescents' social-cognitive growth, they may discourage their personal investment in academic pursuits. The work of researchers in the field of organizational behavior (Argyris, 1965; Bennis, 1969; Schein, 1969; Tjosvold, 1980) suggests forcefully that organizational arrangements which give individuals relative autonomy over their actions and provide opportunities for collaborative problem solving between superiors and subordinates facilitate members' experience of "psychological success" (Tjosvold, 1980, p. 289), increase their personal commitment to the task at hand, and enhance individuals' "social and intellectual capacities" (Tjosvold, 1980, p. 289).

If classroom content is to provide fuel for the development of adolescent epistemology, and encourage the questioning and exploration of the moral, social, and philosophical issues which surround collective social life, the student role needs to be redefined. The student should not be defined as a passive and powerless consumer of pre-packaged curricula, but rather as an active agent who struggles with others to take responsibility for learning and social behavior.

The process of identity formation may also be negatively affected if students internalize views of themselves as passive automatons who are unable to direct their own learning or take responsibility for their social behavior. Alternatively, students may become disaffected with the process of education and exclude academic engagement and curiosity from their own vision of themselves. On the other hand, peer relationships may be strengthened by such a student role definition; adolescents' resentment and boredom can provide a powerful common focus for initial affiliations. The development of relationships with teachers, however, is likely to suffer from the strains inherent in keeping student behavior safely inside the confines of the student role. As Willard Waller observed of the typical teacher-student relationship where pupils must be constantly "kept in line":

> The teacher pupil relationship is a form of institutionalized domination and subordination. Teacher and pupil confront each other in the school with an original conflict of desires, and however much that conflict may be reduced in amount, or however much it may be hidden, it still remains. The teacher represents the adult group, ever the enemy of the spontaneous life of groups of children. The teacher represents the formal curriculum, and his interest is in imposing that curriculum upon the children in the form of tasks; pupils are much more interested in life in their own world than in the dessicated bits of adult life which teachers have to offer (1932, pp. 195-196).

Turning to the consequences of the passive student role for the development of autonomy, recent research by Kelly (1979) and his associates (Jones, 1979; Rice & Marsh, 1979) on the "coping and adaptation" of adolescent boys presents a confusing picture. These investigators determined that in schools where the norms and procedures do not specifically encourage student involvement in planning and decision making, adolescents can nonetheless demonstrate autonomous, self-initiated behaviors. Kelly's research was conducted in two high schools which were generally similar in physical facilities and campus, composition and preparation of faculty, and SES of students. The two schools differed markedly, however, in social and influence structures:

> The principal at Wayne [High School] seems to have a large amount of influence at his school . . . yet students share some of the decision making. At

> Thurston [High School], the school board and the parents have larger amounts of influence, and the students seem to be left out . . . Less consensus is found among the Thurston staff in terms of their expectations for students (Rice & Marsh, 1979).

The researchers hypothesized that the environments of Wayne and Thurston would differentially facilitate "exploratory behavior," a coping style which resembles what I have called the expression of autonomy. Kelly and his colleagues considered exploratory behavior to be "significant for adaptation" because it leads to greater familiarity with the "social resources" present in the environment and knowledge of their use (Jones, 1979, p. 152). To test this hypothesis, a dyadic problem-solving situation was created to measure exploratory behavior. It was assumed that students who had attended Wayne High School would demonstrate more "exploratory behavior" than those who had attended Thurston. After coding and analyzing verbatim transcripts of students' problem-solving discussions, the researchers determined that the results did not support the hypothesized school effects. Jones comments about this counter-intuitive finding:

> In deriving the hypothesis, a case was made for Wayne being more likely to encourage exploratory behavior because of the school's clearer norms and greater flexibility. There is another way of looking at it, though. It may be easier to be a social explorer at Wayne, but it may also be less crucial. For instance, if information about norms is freely available, there is less need to acquire coping styles to help attain it. Thurston provides a rigid but murkey environment. Norms are not clear. Students are not as comfortable with peers or staff. There is tension and ambiguity. Under these conditions, a high explorer may get more mileage out of his coping style, in spite of the lumps he may take. In sum, the noxious environment of Thurston may actually provide greater rewards for exploratory behavior and with it develop greater capabilities for school problem solving (1979, p. 171).

One implication to be drawn from this study is that school environments and the student role they require may foster the development of autonomy in different ways. A circumscribed student role, which does not formally allow students to participate in school governance, may nonetheless facilitate the development of autonomy if students engage in "school problem solving" on their own. Students are thus forced to discover the limits of role-appropriate behavior by themselves, and determine without formal assistance how to accomplish their own goals in a "noxious" environment. As a result, they may become quite adept at the covert exercise of autonomy.

The Impact of the Social Organization of the Classroom on Adolescent Development

By social organization of the classroom, I refer to the social and material arrangements by which teachers and students come together to complete assignments and accomplish schoolwork. These include the manner in which the teacher organizes children and materials for instruction (e.g., individualized programs, small group tasks, whole class seatwork, whole class recitation, etc.), the nature and similarity of assigned learning tasks as well as the freedom given students to choose and define their own tasks, the amount of cooperation and interdependence (if any) required of students during the completion of assigned tasks, and the nature of the classroom reward and accountability systems.

Although little research has been conducted at the secondary level which focuses on the impact on students of these organizational features of classroom life, a number of provocative studies have been conducted with slightly younger (and occasionally older) students (e.g., Aronson, Bridgeman, & Geffner, 1978; Bridgeman, 1977; Bossert, 1979; Covington & Berry, 1976; Covington & Omelich, 1979; Deci, Nezlek, & Sheinman, 1981; Johnson, 1980; Rosenholtz & Rosenholtz, 1981; Simpson, 1981; Weinstein, 1981). My strategy in this section is to draw upon this research for examples of the processes which have been demonstrated or hypothesized to occur in classrooms, and consider these processes in light of the four dimensions of adolescent development enumerated earlier in this paper.

In drawing on these studies, I assume that the social processes observed in the upper elementary grades continue to occur in identically organized secondary classrooms. An important difference between the structure of elementary and secondary school, however, is the fact that adolescents attend a series of classes taught by different teachers in secondary school, and may have more opportunity to experience varied types of classroom organizational arrangements.[2] I assume that the individual classroom effects reported in the studies cited below may be diminished or increased by the aggregation of classroom experiences throughout the school day, an assumption supported in recent research by Sleeter (1981).

The first dimension of adolescent development to be considered here is that of cognitive growth in the social domain. In the past 20 years much activity has centered around the development and implementation of specific curricula and procedures designed to facilitate the development

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[2]My colleagues and I at the Far West Laboratory began a study of student transition from elementary school to junior high school with the same assumption. Much to our surprise, we found most seventh-graders at the junior high school we studied experienced more varied classroom environments in the *sixth* rather than the *seventh* grade. See Rounds, Ward, Mergendoller, and Tikunoff (1981).

of more mature levels of social-cognitive thought (Mosher, 1979, 1980; Selman, 1980). A central strategy of many of these interventions has involved the facilitation of individuals' social perspective-taking ability, by which one is able to take the role of others and see the world through their eyes. Social-cognitive intervention programs which place students in situations where they are encouraged (if not required) to take the perspective of others, and then mutually examine and discuss differences in perceptions, presuppositions, and judgments have been regularly shown to facilitate social-cognitive development (Higgins, 1980).

Within the classroom, it is the "goal structure" which determines with whom students work to complete the task. Johnson identifies three types of classroom goal structures--cooperative, competitive, and individualistic:

> A *cooperative* goal structure exists when students perceive they can obtain their goal if and only if the other students with whom they are linked obtain their goals. A *competitive* goal structure exists when students perceive that they can obtain their goal if and only if the other students with whom they are linked fail to obtain their goals. An *individualistic* goal structure exists when students perceive that obtaining their goal is unrelated to the goal achievement of other students (1980, p. 133).

The use of cooperative goal structures to promote task involvement requires students to learn to express their own and understand others' perceptions, and reach mutual accommodations concerning the courses of action to be taken. After conducting a major review of the impact of group processes on student learning, Johnson concludes that the impact of classroom goal structure on social-cognitive development is unequivocal:

> cooperative learning experiences . . . promote greater cognitive and emotional perspective-taking abilities than either competitive or individualistic learning experiences (1980, p. 138).

The second component of adolescent development considered here is identity formation. This requires students to make realistic assessments of their individual preferences and abilities. Given the nearly universal emphasis placed on academic achievement in this society, and the large amount of time students remain in school, a student's conception of his or her academic ability forms a cornerstone of a more global self-conception, and may have a major impact on his or her generalized feelings of self-worth (Johnson, 1980; Schmuck, 1978). Within the classroom students seek and receive a great deal of information about how they are doing. Some assessments come directly from the teacher in the form of

grades, written comments, and casual remarks (Weinstein, 1981). Other assessments are made by students themselves as they appraise their own accomplishments in light of those of other students (Frieze, 1980). Such social comparison processes (Festinger, 1954) thrive within the typical classroom, as any teacher who has watched students look around the room to determine who has finished the assignment will attest. As Frieze notes, the "school setting is one in which the desire for social comparison information is maximized" (1980, p. 61).

For students to be able to compare their own academic attainments to those of others there must be a common metric of accomplishment. As Bossert (1978), Rosenholtz and Rosenholtz (1981), and Simpson (1981) have shown, the existence of such a common metric depends greatly on how the social organization of the classroom orders the instructional tasks and information available to students.

Important organizational characteristics which influence the information available to students about their own and others' levels of performance include:[3]

> *Classroom task differentiation* [or] . . . the number of [academic or social] dimensions along which students perform. The higher the task differentiation, the greater the probability that different students will excell at different skills, and the less likely the tendency to perceive any given student's performance as consistently good or poor.
>
> *Student autonomy* . . . the greater the autonomy, the greater students' opportunities to dimensionalize their performances by selecting a variety of different tasks.
>
> *The teacher's grouping and comparative assessment practices* . . . where students are grouped by ability or grouped as a whole class to perform similar tasks, teachers are likely to engage in comparative assessments . . . [when] students work individually at a variety of different tasks, performance is more likely to be judged by individually referenced standards, and performance inequalities should be far less noticeable (Rosenholtz & Rosenholtz, 1981, p. 134; emphasis added).

The impact of these organizational features on students' assessment of their academic ability in reading and consequent perceptions of identity were shown to be quite direct:

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[3]These organizational characteristics resemble the components of the "activity structures" identified by Bossert (1979).

> In unidimensional instruction, where few choices in performance interpretations are available and where these choices are highly visible, evaluations of individual students by the teacher, classmates, and self more frequently disperse into high and low rankings of ability. In contrast, under multidimensional conditions, where a greater range of performance information is made available and where that performance information is less visible, students and teachers tend toward more similar rankings of average or above average in reading ability (Rosenholtz & Rosenholtz, 1981, p. 139).

This finding gains additional significance if students do not rely on a cumulative assessment of their own academic ability based on years of classroom experience, but reinterpret "situational cues regarding ability" when they enter new classrooms, thus engaging in "more situation-specific judgments than had been thought" (Simpson, 1981, p. 131). This suggests that self-perceptions of ability are alterable given the organizational features of classroom experience. As a consequence, adolescent identity formation may be propelled toward assessments of either self-worth or self-inadequacy depending upon the organizational features of the classrooms students inhabit. In unidimensional secondary classrooms, students' global self-perceptions of academic ability should tend toward dichotomization: students either perceive they are smart or dumb. In multidimensional secondary classrooms, students' global self-perceptions of academic ability should tend toward a median ranking of competence and demonstrate more complex and differentiated thought.

The goal structure of classroom learning tasks is an additional organizational factor that has been shown to affect the development of individuals' senses of self-worth. Cooperative goal structures require students to work together to complete the assigned task and lead "individuals to treat their partners in the same ego-enhancing manner they treat themselves" (Aronson, Bridgeman, & Geffner, 1978). Such treatment provides implicit and explicit information to students that they are worthy individuals who have the ability to contribute to the completion of classroom tasks. These messages, in turn, facilitate the development of students' perceptions of self-worth. Field experiments conducted with fifth and sixth grade students have demonstrated that a relatively brief exposure to cooperatively-structured learning experiences can produce gains in self-esteem when compared with the self-exteem of students engaged in independent learning tasks (Johnson, Johnson, & Scott, 1978) or traditional competitive classroom instruction (Blaney, Stephen, Rosenfeld, Aronson, & Sykes, 1977; Geffner, 1978).[4] Such gains in self-

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[4] Johnson, Johnson, and Scott (1978) employed interdependent learning tasks for one hour a day for 50 days. Blaney et al. (1977) reordered classroom processes for 45 minutes a day, 3 days a week over a 6 week period, and Geffner's (1978) research was conducted over "an 8 week period" (Aronson, Bridgeman, & Geffner, 1978).

esteem should facilitate the development of self-acceptance and self-confidence--two of the signs of positive identity formation.

The social organization of students' classroom experience does not only affect adolescent identity formation, it can have significant impact on the establishment of adolescent friendships. Johnson (1980) and Schmuck (1978) argue persuasively that classrooms which utilize cooperative goal structures facilitate the formation of mature friendships among students. Johnson writes:

> There is considerable evidence that cooperative experiences, compared with competitive and individualistic ones, result in more positive interpersonal relationships characterized by mutual liking, positive attitudes toward each other, mutual concern, friendliness, attentiveness, feelings of obligation to other students, and a desire to win the respect of other students (1980, p. 139).

Since the classroom provides an important arena for peer affiliations, its impact on adolescent friendship development may be quite substantial. Classrooms which foster the intimacy enhancing characteristics cited above should thus facilitate adolescent growth.

Bossert's (1979) research on the social organization of classrooms also illuminates the impact of classroom organization on the establishment of student friendships. Bossert discovered that students formed ability-homogeneous friendship groups and maintained these groups throughout the year in the classrooms of teachers who relied predominately on recitation forms of instruction. (Rosenholtz and Rosenholtz would probably call these unidimensional classrooms.) In the classrooms of teachers who relied more upon small group and independent assignments (what Rosenholtz and Rosenholtz would probably call multidimensional classrooms), students formed ability-heterogeneous friendship groups, and the membership of these groups remained fluid as hobbies and common interests shifted. Bossert concludes:

> To the extent that task performances are visible, comparable, and clearly linked to classroom rewards, children will choose friends on the basis of academic status (1979, p. 91).

These results articulate well with the findings cited above by Johnson. So far as classroom instructional systems allow students to compare their attainment with that of others, they encourage social relations which are stratified according to the prevailing academic hierarchy. This impedes the formation of a wide range of positive relationships and fosters interpersonal competition. In contrast, classroom instructional systems which require students to work together, and which do not draw explicit attention to the successes and failures of individual students will

facilitate the establishment of a broader range of friendships which demonstrate higher levels of trust, intimacy, and mutual sharing.

While I have implicitly argued above that multidimensional classrooms which provide for the expression of student autonomy facilitate the development of a positive identity, the development of autonomy as a dimension in its own right is equally important. An interesting study conducted by Deci, Nezlek, and Steinman (1981) examined the impact of teachers' reward and control styles on students' intrinsic motivation and self-esteem. Deci and his colleagues hypothesized that students assigned to the classrooms of teachers who were oriented toward controlling their students through the frequent use of teacher-initiated rewards and sanctions would have lower levels of intrinsic motivation and self-esteem than those students who found themselves in the classrooms of teachers who tried to facilitate student autonomy and the resolution of classroom issues with minimal teacher direction. They conducted their research in 36 third and fourth grade classrooms. Teachers were asked to complete a questionnaire which described typical classroom problems ("not preparing lessons, bullying other children, stealing") and which presented different ways each problem could be resolved. These resolution scenarios had been constructed to reflect four orientations ranging from "highly controlling--teachers make decisions about what is right and utilize highly controlling sanctions to produce the desired behavior" to "highly autonomous--teachers encourage children to consider the relevant elements of the situation and to take responsibility for working out a solution to the problem" (1981, p. 5)

From the perspective of student development, however, it is not the orientation of the teacher which is significant, but the nature of the classroom experience lived by the student. While Deci and his colleagues focused on the personal orientations of teachers, it must be assumed that these orientations were operationalized in a system of instruction and management which reflected the teachers' intentions. One must presume the classroom procedures of the "highly autonomous" teachers included community meetings or other ways to resolve classroom problems, while the "highly controlling" teachers provided no such mechanisms for the exercise of student autonomy.[5]

The results of this study generally supported the initial hypotheses of the investigators. They write:

> Within the first six weeks, the children had adapted to the teacher. Those who were with teachers that were oriented toward autonomy and the use of rewards as information rather than control tended to adapt to the situation by operating more with an intrinsic mode. Once this adaptation was made, it tended to

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[5] Unfortunately Deci and his colleagues did not observe classrooms, so we remain ignorant of the actual nature of student experience in the classrooms of autonomous and controlling teachers.

> be stable as long as the situation remained constant . . . In sum, this study showed a clear relationship between characteristics of the rewarder and intrinsic motivation and perceived competence of the rewardee (1981, pp. 8-9).

These findings demonstrate that students' classroom experiences can affect more generalized self-perceptions and behavioral preferences. If students are to learn autonomy, they benefit from the opportunity to practice it. Students' desire and ability to undertake tasks on their own (an overlapping component of both intrinsic motivation and autonomy) will be impeded in a classroom environment which does not allow for and encourage such self-expression.

Concluding Thoughts

In general, the research cited above suggests that the typical comprehensive secondary school has a deleterious effect on adolescent development. Schools are too big. Students are too often excluded from taking an active role in school governance and directing their own educational programs. Classrooms are too often competitive environments where recitation remains the predominant mode of instruction.[6] Such schools can maim in the name of education.

The research cited above, however, also implies that schools can facilitate adolescent growth. The organizational features of secondary schools provide powerful levers to facilitate (as well as impede) the developmental processes. Our task here is to take careful hold of these conceptual levers, and plot appropriately envisioned manipulation.

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[6] In the junior high school which was the site of the Junior High Transition Study, out of a sample of 11 seventh grade teachers, we found only 2 whose predominant mode of instruction was not recitation. See Ward et al. (1981).

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REACTION: ADDITIONAL CONSIDERATIONS ABOUT SCHOOL ORGANIZATION AND ADOLESCENT DEVELOPMENT

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Mergendoller has spelled out a clear conception of adolescent development and has systematically related it to various elements of the organizational character of schools. I have little quarrel with the points he makes, but there are some on which I think it would be helpful to expand.

Adolescent Development

As a sociologist I confess myself a near layman in understanding the psychological form of adolescent development. I will not comment in detail on the model of adolescent development presented in Mergendoller's paper other than to say that it seems to reflect dominant thought in the field. That dominant thought, however, gives me some pause.

It seems that a definition of development centered around identity, autonomy, and cognitive development puts the individual not only at the center but at the pinnacle of consideration. I am only slightly comforted by the inclusion of relatedness and social-cognitive growth in the model. Despite disclaimers to the contrary, these dimensions of development are described in a way that suggests that the adolescent grows *through* such social contexts rather than growing *within* them. I do not think that this implication is an accident of language. Rather it reflects an emphasis in the psychological analysis of development upon the ability to separate, to develop as an isolated entity, more than upon the ability to relate, to co-operate, or to participate in continuing social commitments.

Further, one has to compare this psychological normative model of development with the models implicitly favored by parents, the adults most intimately concerned with the growth of particular young people. There is scanty literature, much in need of growth, which suggests that middle class parents and working class parents have quite different visions of ideal development and ultimate virtues in their children (Kohn, 1977; Rubin, 1972, 1976; Joffe, 1977). The virtues which these parents seek in their children and the channels in which they seek to guide their development are heavily colored by the adults' own social life experience, an experience which differs significantly between classes. Working and lower class parents who see the schools trying to lead their children toward more middle class (and generally more psychologically normative) patterns of development often react with anger that their children are both being alienated from their families and taught lessons which will serve them ill in the adult lives their parents think them most likely to experience (Joffe, 1977; Rubin, 1972).

There are of course numerous ways to evaluate this literature. One can claim with Bowles and Gintis (1976) or Willis (1977) that these attitudes are directly or indirectly foisted upon the working class family by the captains of industry who profit by making these families embrace stunted personal development and alienated labor for which they receive inadequate economic rewards. If these parents pass along to their children a pattern of individual development which makes them similarly embrace such labor, parents are doing the work of the owners of industry for them. With or without a Marxist framework, that is a position which has to be taken seriously.

And indeed without the analysis of economic relationships, that is a position which many psychologists would take, arguing that such parents and children together experience incomplete personal development. One can argue that the discipline and collective insight of the psychological tradition allow a vision of inherently full adolescent development, even though many socially competent adults do not exemplify it. I would by no means dismiss this hypothesis. But given the much more frequent appearance of "successful" development of this kind among persons in modern urban settings, among the middle class, and among males, I think one has at least to ask whether this model of development may be in part a social portrait of the ideal middle class urban male rather than a model of inherent psychological development.

In fact, it is possible to take the logic of the literature on the effects of adult life experience on adolescent development, and apply it directly to psychologists as an occupational group. This logic suggests that they experience a distinctive set of conditions in their occupational lives which lead them to look for

characteristics of the developing young which would suit them to similar occupational (and associated social and leisure) lives. One can perhaps argue further that the dominant tradition in psychology of treating patients as individuals is one (not the only) contributing factor to the emphasis upon development as an individualistic enterprise in which social relationships are seen as means more than as ends.

The Impact of Secondary Schools

It seems important to remember that secondary schools are not the only context in which young people have an opportunity to develop. And since, as Steven Hamilton has pointed out, they are formal organizations with the official purpose of emphasizing cognitive learning, it may be that some forms of development should and can occur outside their walls while they lay their emphasis upon cognitive development. On the other hand, children spend a significant proportion of their waking hours in schools and they do so as total persons, not as walking bundles of cognitive potentialities.

Mergendoller has done a laudable job of drawing out some of the organizational characteristics of schools which are relevant to student development. It seems to me, however, that one might organize them slightly differently. The concept of the student role is primary. It is through this role that the student's experience of schooling is shaped. School size and classroom activity structure have their effects by altering that role in various ways.

The Impact of School Size

I can only applaud Mergendoller and the authors whom he cites for their attention to school size and their satisfactory structural analysis of its impact. Most of us with experience in schools have probably developed an intuitive feel for the advantages of small size, but it needs this sort of dispassionate and hardheaded demonstration.

Thus small schools may be seen to help development because their structural characteristics provide a higher proportion of leadership positions, greater active participation in extra-curricular activities, and more opportunities for cooperation around a task. Students have a chance to practice autonomy and develop friendships around activity. They have more opportunity to try a variety of activities and in doing so to explore varied bases for identity. They have more opportunity also to perceive the social entity of the school in personal terms and thus to

develop a sense of intimate social participation and personal belonging.

But these structural conditions are conditioned by cultural meanings. Such structural conditions provide only the opportunity for cooperation, leadership, and varied constructive activity. They may also provide a context for conflict and competition, for rivalry and hostility if the cultural assumptions and personal relationships of the school foster these.

Of eight schools in which I have spent considerable time in ethnographic observation over the years (Metz, 1976, 1978, forthcoming), three had student bodies of approximately 400 or less. Two of those had clearly the most supportive relations between adults and students and among peers as well. The third had the most hostile and abusive relations and had experienced a full scale racial conflict on the playground which brought the police to separate the parties.

We know from the study of the family that if intimacy can bring mutual support and caring it can also bring resentments that last a lifetime, violence, and even homicide. Intimacy in schools may be no different. Where negative feelings exist and there is not a concerted effort to overcome them, close personal contact may exacerbate rather than relieve them. In a small school it is more difficult for diverse groups to find their own separate turfs and develop patterns of peaceful coexistence through dividing the spaces and activities of the school among them (Sullivan, 1979). Small schools with diverse student bodies, then, may be more likely than large ones to bridge that diversity and learn about one another's ways, and actively seek common ground despite diversity. But they may be more prone to intense conflict than large schools if they fail to make these bridging efforts.

The Impact of Structure

In discussing size, Mergendoller implicitly suggests the structure of schools as a variable which may affect student development. We could also consider additional structural dimensions. For example, school architecture may encourage small groupings or large impersonal aggregations, and in doing so, may ease or exacerbate problems of control and the social arrangements they bring in train (see below). One can also consider the grade level organization of the school, its curricular structures, and its amount and kinds of extracurricular activities as dimensions of structure which will affect the social life of students and through that their individual development. Tracking and classroom activity structures, discussed below, are two additional dimensions of structure which are particularly important.

The Impact of Culture

As I have suggested in the case of size, these structural variables have their effects in combination with cultural influences. Some of these cultural influences are brought into the school by both student and staff participants. Thus the life of two schools with similar plants and formal structures will still be likely to differ if one is in a solidly working class area and the other in an upper middle class area so that their student bodies differ. And--less obviously--the lives of two such similar schools with similar student bodies are also likely to differ if their faculties have markedly different cultural assumptions.

Not only do students and adults bring into the school the cultural assumptions of their class and ethnic backgrounds, but they develop subcultures within the school which are only partially determined by their cultural backgrounds. Newcomers among both staff and students are socialized to the faculty or student culture. Generally its assumptions are seen as rooted in the character of schools or schooling even though they may be quite different from those of other schools not very far away or very different in social composition (Metz, 1976, 1978, forthcoming; Nordstrom et al., 1967; Rutter et al., 1979). These cultural assumptions give meaning and definition to such crucial issues as the nature of adolescence, the nature of adolescents from particular class and ethnic backgrounds, the character of the learning process, and the ends of education. These cultures then form the context of ideas and relationships within which individual students' formal and informal roles are shaped. The activities they may engage in, the relationships they may form, the cognitive opportunities they will be given, the meanings which will be infused into all of their school lives, and their understandings of themselves and their relations with others in various role relationships to them are all shaped by these cultural assumptions.

Not only will the culture of a school be affected by the class, ethnic, and religious background of both students and teachers, it will also be affected by their homogeneity or heterogeneity. Under conditions of heterogeneity, each group's perceptions of other cultural groups will be important and will strongly influence the extent to which heterogeneity is believed to promote or hinder development in some desired direction. Here we encounter some strong and conflicting lay definitions of development and some unrecognized assumptions among professionals.

A combination of the political structuring of school districts and real estate practices which separate the residences of class, racial, and to a degree religious groups has gone far to segregate urban and suburban schools along all these dimensions. There is

some evidence that many working class as well as middle class parents prefer to keep their children with "their own kind." They fear that contact with children of a different background will woo their children to values different from their own (Peshkin, 1978; Rubin, 1972). Other parents embrace the opportunity for their children to have contact with children of different backgrounds, either because they are ambitious for their children to become part of a different milieu (Kahl, 1961) or because they believe that contact with diversity is itself developmentally enriching.

While tolerance for diversity and ambiguity is generally considered a trait of the developed personality, it is not clear that all students of development would be proponents of a genuinely diverse school environment--one in which the values of lower social classes or of minority ethnic groups were given as much honor and space for expression as those of the urban, middle class whites who are generally perceived to be more developmentally advanced. These are not easy issues to resolve when they are faced in concrete terms--as they must or should be in many urban systems undergoing racial desegregation and often social class desegregation as well. Middle class parents, both black and white (Orfield, 1978), have not unanimously shown themselves to value social diversity as a developmental experience or its acceptance as a developed characteristic when they were faced with it in practice. The increased interest in special classes for the gifted and talented in recent years also suggests a low value on the experiences to be gained from social diversity in comparison to those to be gained from accelerated or enriched cognitive experience for students dedicated to middle class academic or aesthetic values, whatever their background.

The Impact of the Student Role

When Mergendoller deals with the student role explicitly he does so as though it were a single entity, "a" student role. Implicitly in dealing with school size and with variations in activity structure, he recognizes variations in it. At a sufficiently high level of generalization, it is prefectly appropriate to speak of "the" student role. And at this level, I am once more in fundamental agreement with Mergendoller. I have elsewhere argued (Metz, 1978) that there exist distinctive kinds of organizational arrangements which are most effective either to contain an actively hostile student body or to channel a more docile student body so as to minimize disruptions of routine in a densely populated setting where order and concentration have fragile structural underpinnings. Both kinds of distinctive organizational arrangements tend to discourage students' commitment to active academic learning and their loyalty toward and autonomous action for the school as a meaningful social group.

This finding should probably not be surprising. Schools are more vulnerable to discord than are most formal organizations because of the nature of their work, their semi-socialized population, and their social density. And formal organizations in modern society for the most part encourage neither spontaneous activity nor autonomous expression.

I am intrigued by Mergendoller's report of the research by Kelly (1979) and Jones (1979) suggesting in essence that too reasonable, open, and fair an organization provides little challenge to the exercise of social inventiveness and autonomy. Perhaps this research should remind us that that in modern society daily realities require that the young learn to operate in the informal as well as the formal systems of organizations. They perhaps even need to know how to "work the system." Schools which provide training in learning the discrepancies between informal and formal systems and how to pursue one's own purposes within such a context may be imparting an important life skill.

There are hints in the literature about such learning in high schools. Swidler (1976) studied a free school with a working class predominantly minority population, which had a great deal of difficulty in creating much "formal" organization or imparting much cognitive knowledge. But she suggests that this school at least gave its students a sense of social entitlement which middle class students are more likely to bring from home, and that it taught them how to make insistent demands upon a formal structure and to find alternative avenues when official doors were closed to them.

Future research could profitably investigate the teaching both of the psychological predisposition to persist in such situations and of the social skills for finding one's way through the back doors and little trodden paths of a bureaucracy. There are scattered suggestions of informal socialization of students in such attitudes and skills in the literature we already have (e.g., Cusick, 1973; Gordon, 1957). This literature suggests that these skills are taught on a highly particularistic basis to only a few students who are strongly selected for high status within the school and usually within the community as well. Other students may instruct themselves in how to follow their own purposes despite organizational patterns. But for many students, such patterns of learning may lead to open violation of school expectations, and to relative psychological immunity to meaningful punishment. These patterns have destructive consequences for students' future social chances (Metz, 1978; Morgan, 1977; Willis, 1977).

This line of thought should also remind us that the formal student role by no means exhausts students' behaviors or experiences in schools. As Coleman (1961) and Cusick (1973) have made abundantly clear, students have a flourishing social life of their own which is only indirectly shaped by the formal values and activities of the

school. Researchers concerned with individual development in schools would be well advised to investigate these less formally structured experiences far more thoroughly than they have up to now.

The Impact of the Social Organization of the Classroom

Mergendoller comments on the important and growing literature on variations in classroom activity structures. He connects variations in activity structures to their logical correlates in individual development. Certainly students spend most of their time in school in the classroom, so that alterations in activity structure which alter students' activities and relationships can be expected to have an impact on their personal development.

Most of this literature so far has emphasized the effects of activity structures on students' self-concept and their peer relations, especially the formation of positive feelings or friendships across differences in achievement level or race. These outcomes are not in themselves developmental issues, but self-concept is likely to affect a student's commitment toward cognitive learning and effort in that direction and thus his or her cognitive development as well as the formation of his or her identity. Peer relations will shape values and meaning systems, and also the capacity to relate to others who are different as well as similar.

It would be a useful supplement to this literature to combine it with the literature on tracking. By definition tracking places students in groups segregated by academic performance, so that peer contact, at least in tracked classes, is only with persons with similar achievement. A few ethnographic studies have suggested that tracking tends also to create unplanned differences in activity structures and classroom relationships which may be important determinants of whatever effects it has.

Two of these studies (Metz, 1978; Morgan, 1977) did not set out to study tracking as such. One was designed to study effects of congruence and incongruence in teachers' and students' definitions of classroom authority, and the other to study variations in classrooms as models for and contexts in which to learn about democratic participation. Both were brought by observation to conclude that differences among classes of different tracks were stronger than differences among schools or among teachers--despite real variation in those categories as well. Hargreaves (1967) with a more direct interest in tracking found the same phenomenon.

These studies' findings are fairly consistent in characterizing differences in the tracks. Higher tracks were given more open-ended or divergent kinds of curricular tasks by teachers. They engaged in more oral discussion, and students were freer to take part in defining the direction of analysis of a particular issue in a particular class.

Students participated more actively, cooperatively, and enthusiastically. Where discipline was applied, it was to distractions from the academic task rather than to social behavior as such. Except for the expectation that students would remain on task with attention to the academic work, the atmosphere in the classes was relatively relaxed. Relations between teacher and student were generally congenial with minimal tension and conflict.

In the lower tracks, on the other hand, tasks tended to be closed-ended, convergent ones. Often they involved filling in correct answers on work sheets. Oral interchange was limited. Students were less involved in the task and less willing to participate. There were more attempts by students to distract others from the task. Discipline was harsher and more peremptory, though inattention to the task which did not distract others might be tolerated. Relations between teacher and student were more tense and constrained; teachers were more directive. There was a higher probability of overt conflicts among students.

In short, according to these three observational studies, the classroom activity structure, the style as well as the difficulty of curricular content, and the character of both teacher-student and peer relations varies with track level. These differences affect students' access to cognitive content and presumably their interest in academic content, their identity as engaged academic learners, and their sense of autonomy based on classroom experience. Morgan's and Hargreave's studies are particularly persuasive concerning the strength of difference brought about by tracking itself. Morgan found greater differences among tracks than among schools he had chosen to be internally homogeneous but to vary from each other. Hargreaves found that tracking differences increased markedly through the course of students' experience in English secondary modern schools where students were working class and were selected through low achievement on national exams. Thus, though tracking differences may sift out social variation even in homogeneous settings, tracking seems also to have independent effects upon students' experience and their responses. It does not require much of an inferential leap to suggest that prolonged experience in such different settings will have effects upon identity, autonomy, and both kinds of cognitive growth. It will probably have effects on social relationships in more indirect ways.

Intriguing as they are, these case study swallows do not make a summer. We need a good deal more study of tracked classes as social settings in order to specify more exactly the ways in which tracking shapes student experience. We also need to ask what part earlier socialization and aggregated individual characteristics of the students in these classes play in shaping their distinctive character. In my own study, it was clear that the students both in lower tracks and in higher tracks pushed teachers into patterns common to those tracks even when the teachers were reluctant. Students

exerted this influence after many years of experience with other teachers of those tracks, of course. But still one has to ask about the effects on class activities in tracks of social class differences in childrearing, of differences associated with individual cognitive skills, and of differences which grow out of the students' adaptive strategies for coping with the social definition of their track placement and the future it forecasts.

Some light may be thrown on the relative contributions of these varied influences by studying untracked classes. In my most recent research I have studied three magnet middle schools, each of which is untracked as part of its desegregated character. Two of the three, a school using Individually Guided Education and one using open education, alter conventional secondary classroom activity structures and academic reward structures considerably. In both contexts there is little common lecture or recitation. In the IGE school students sit at tables assigned by their skill on a given task and work on mostly self-administered materials while the teacher circulates, working occasionally with small groups and often with individuals. In the open education school students generally compose their own curricula, though there are some common broadly defined tasks. Teachers approve written statements of goals and daily activities in progress through that curriculum, and as in the IGE school students sit around tables working mostly at self-administered (though in this case more diverse) tasks while the teacher circulates.

Though both these schools have significant concentrations of students who would be in the lowest tracks in a conventional school, classes do not display the tension, testing, hostility, and tight behavior control which the scant literature suggests is typical of classes with such students. It seems important in explaining this different atmosphere, to point out two characteristics of the task and reward structures of these schools. First, students do not have to defend themselves from the embarrassment of publicly performing in an inadequate way with the humorous or raucous distractions which will get them sent out of the room before their turn to read or cipher. Their performance level is not an open book for others to read through a track label or public performance. Second, the academic reward structure in both schools measures and evaluates a student against his own past performance rather than against a group standard. It is possible therefore for the student who has low skills to receive some formal recognition for effort and progress even if his objective achievement level remains below average. At the IGE school such children theoretically can make the honor roll on the basis of effort, and some average and low average achievers do.

Teachers' morale and positive sentiments towards these classes are also raised by the combination of lower levels of conflict and the reward structures which allow teachers as well as students to

document successful outcomes from common effort even with students' below grade level. These structures, aided by feeder patterns which bring most children into the school without a ready made group of friends, also seem to encourage friendship and positive ties of acquaintance across barriers of race and of achievement level.

The third school in the study provides some confirming evidence on these effects through its contrasting patterns. It has a student body with much higher achievement levels--three-fourths perform above the national average on tests--and the students are selected as "gifted and talented" by elementary teachers, so that they are generally pleasant and cooperative as well as able. It also has classroom activity structures which are highly traditional. High achievers sometimes complain of boredom while low achievers are generally simply not called upon after the first months of the sixth grade. When a substitute calls upon them there is embarrassment all around.

It is at this school, despite its "ninety-eight percent nice kids" as described by one teacher, that students are most often sent to the office for disciplinary referral. It is at this school that students and teachers display the most tense and wary--though only occasionally actively hostile--relationships. It is at this school that students speak of being hassled by students of the other race (in both directions) and that the walls and bathrooms bear racial slurs. There are other differences among the schools besides their classroom activity structures, but given the fact that both adult-student and peer relationships show characteristics reversed from those one would expect given students' achievement and social class, this study at least suggests far reaching social and academic effects of classroom activity structure.

However, lest I suggest that we are on the way to discovering a panacea, let me mention some of the drawbacks of the activity structures at the first two schools. First, a crucial characteristic is the self-administered and therefore private character of tasks. Therefore oral interchange and discussion concerning academic material are discouraged if not impossible. The skills they teach are not fostered. Second, if their privacy protects the low achievers from their usual embarrassments, it prevents the high achievers from getting their usual praise. Privacy may therefore depress achievement among able but less intrinsically motivated students. Third, these activity structures seem to remove some of the barriers to academic effort and enthusiasm among low achievers, but they do not go the next step and create effort. Teachers in both schools complained that some students' lack of academic effort was their most serious concern. Fourth, these classroom activity structures are more work for teachers than traditional ones. They are consequently socially fragile.

Finally, Elizabeth Cohen (1980) has criticized the studies of co-operative learning cited by Mergendoller for failing to take account of the previous status definitions existing among children. She argues that where there are obvious status differences--as those associated with race in American children--co-operation will reflect and re-enforce such hierarchies unless vigorous efforts are made to create structures to reverse these expectations. Contact among students will not create equalitarian mutuality unless it is equal status contact. Schofield and Sagar (Schofield & Sagar, 1979; Schofield, 1980, forthcoming) have explored these issues in the naturalistic setting of a desegregated school.

In conclusion, while Mergendoller has done a good job of laying out the important dimensions of development and their intersection with important organizational characteristics of schools, I have attempted to add slightly to his model. I have suggested that development should be conceptualized with more attention to variations in social expectations for adult competency and the varied models of adolescent development they imply. I have suggested that the student role is the crucial element of school organization impinging upon students' individual development. While it has important constancies it also has important variations which should be considered. I have argued that size is only one of several structural characteristics of schools which can affect the student role and through it individual development. The effects of these structural characteristics are modified by cultural assumptions which students and staff bring with them into the school or which they build and elaborate within its walls. Students' informal roles must be considered along with their formal ones as shapers of their development. Schools may instruct students directly or indirectly in the arts of participating in the informal system of an organization. Finally, I have suggested that a study of naturally occurring differences among classes of different tracks may uncover many differences in activity structures. I agreed with Mergendoller that these activity structures shape students' roles and experience and therefore their sense of identity, their opportunities to exercise autonomy, and their opportunities and enthusiasm for cognitive learning, as well as their capacity to build social relations with similar or with diverse other persons.

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CURRICULA AND PROGRAMS IN SECONDARY SCHOOL WHICH POSITIVELY INFLUENCE ADOLESCENTS' DEVELOPMENT --WHERE THERE'S THE WILL, THERE'S A WAY

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This paper examines selected secondary school curricula and programs which promote development in adolescence. Such efforts assume that development should be the major aim of education. The philosophical case for development as the goal of education has been argued elsewhere (see, for example, Kohlberg & Mayer, 1979; Sprinthall & Mosher, 1979; Mosher, 1981). It will not be re-introduced here. But without the prior conviction that the education of adolescents should promote their intellectual growth, character, social commitment, ego and emotional growth, vocational ability, aesthetic and spiritual development--all of these in a sound body--I believe it is easy to ignore practical evidence that education can contribute significantly to the growth of adolescent competencies.

Developmental curricula also assume that we have useful ways of conceptualizing adolescents' growth. I want to deal briefly with why I find cognitive developmental theories practical to their education. A response to criticisms of these theories is included. The body of this paper then will be devoted to examining evidence on school programs which positively influence adolescents' development.

I. The Usefulness of Cognitive Developmental Psychology to Education

If one believes, as I do, that the aim of education is the development of children's thinking about right or wrong, nature, number, other people, themselves, work--overall growth in their general understanding--blueprints of the natural evolution of such thinking are needed. Over the years of testing cognitive developmental psychology (Piaget, Kohlberg, Loevinger, Selman, Dupont and so on) in the crucible of the classroom, I have been impressed by how well these theories predict children's and adolescents' thinking. They can help the teacher understand why children think as they do about physical reality, morality, themselves and so on.

For the teacher, as a result, there are *not* as many moralities or as many emotions as there are children. Human understanding and human nature aren't protean. Rather, students show significant commonalities in the way their minds work, in how they understand and why they think as they do. Such predictability is a minimum requirement of any psychology for education. And it permits us to see where children are in their intellectual growing up: the characteristic ways they think, the rules they employ, the meaning they make of their physical, social, and personal experiences, the essence and the limits of those "world" views. In this sense, if IQ is akin to a horsepower rating of the child's brain, developmental stage is like an x-ray, an abstract of its inner logic, structures, or ways of understanding.

That these psychologies describe human thinking in ways that fit its day-to-day expression in adolescents shouldn't be surprising. They are, more or less, empirical. Their veridicality can also tempt one into the psychologists' fallacy: assuming that what commonly is, should be promoted by education. For example, most young men tend to emphasize leaving their family of origin, establishing an "identity" and experimenting occupationally in their late teens and twenties. Somewhat secondarily, they focus on the establishment of intimate relationships. For most women this order seems to be reversed, with relationships primary and identity and work secondary (Rabinowitz, 1981). Do we, then, educate for such apparent sex differences or for androgyny? And why?

Increasingly, also, cognitive developmental psychology is isolating and describing the growth of a wide range of human competencies: logical, scientific thinking; moral reasoning; self-concept; social understanding; affective development; aesthetic understanding; cognition of work and so on. The extent to which people do as they say also is being examined. Again, the comprehensiveness of what a theory, or group of them, describe is a benchmark of their usefulness to teachers facing whole adolescents. Clearly related is the increasing attention of the developmentalists to those experiences which promote or inhibit the growth of human competencies: for example, moral reasoning, social commitment. Such information about what contributes to or blocks growth has great potential use to educators, therapists, or parents.

Further, cognitive developmental psychology offers reasonable research tools, which are getting better. No one, to my knowledge, has ever measured an id or a conscience. Educational psychology, in my opinion, has given us far too many IQs and SATs. The developmentalists increasingly offer ways to measure the degree to which students can think abstractly, understand the function of rules in regulating the academic and social life in a high school, or conform socially. I know that developmental measures have a reliability gap, often are costly to administer and score. No more so, incidentally, than the WISC and the Rorschach, which are a standard part of the testing paraphernalia of every school psychologist. The practical point of this is an increasing ability to say where an individual or group of students are in their development and to ascertain how much growth there is after particular educational experiences, such as values education, physics, counseling, women's studies, etc.

Developmental theories also are melioristic. Or at least they encourage the idea that "development" is in the cards. For one thing, cognitive developmentalists take a life cycle, progressive, and (more or less) a wholistic view of human personality. While there are great qualitative differences in the way adults and children understand the same phenomena (e.g., the Golden Rule, the constitution, electricity), the child's thinking is father to the man's. Development isn't all over by the age of three. Levinson (1978) doesn't believe it is all over by 30. Personality isn't divided into strange three deckers like the id, ego, and super-ego. Nor is behavior the only reality. That what we understand defines much of who we are and at least some of what we do is a comfort to those who make a living teaching adolescents to think.

But the meliorism derives from more than the potential of mind. How, as well as what, we think is a product of our experience. Enrich the individual's or the group's experience and we enhance human capacity. Education is thus an important agency in promoting human thinking and human development. Or it can be, if it wants to be--it is dynamic and generative. In origin, I understand developmental psychology to be as much European as American. Yet, it is peculiarly American in its implicit optimism about human potential and rising above one's status. It is a psychology of man ascending.

Also there is in modern cognitive developmental psychology what Rest (1979) has termed "the venerable lineage [Dewey, Piaget, Kohlberg . . .]" plus "the intellectual heft" of these ideas, and the promise of initiating something more than a superficial, piecemeal, short-lived fad. Powerful ideas, after all, are the only ones worth holding to.

Viva la Difference

On the debit side of the ledger, the cognitive developmental theories, especially Kohlberg's research on morality, are said to be sex-biased, race-biased, and class-biased. Obviously, such criticisms, to the extent that they are valid, have serious implications for education based on these theories. Certainly it would be antithetical to the whole philosophical premise of development as the aim of education either to judge entire groups of people, women or minority adolescents for example, as deficient in development against majority norms and/or to remain inactive on their behalf educationally. Similarly oppressive would be to educate on the unilateral premise of "Why can't a woman be more like a man or a black man like a white?"

Lois Erikson's work, described in Part II, is symbolic of the developmental educators' deep moral and pedagogical commitment to promoting the *all-around growth* of human capacities in *every person*. That is not, repeat not, tantamount to educating "others" to be more like "us," nor is it pushing children along one track of growth. Developmental education need not nor should not be a narrow "escalator" to a particular form of human competence. So if, for example, there is more than one voice of moral judgment, there

is nothing inherent in any of the educational programs described in Part II which would emphasize one voice to the exclusion of the others. But what if our current theories of development blind us in one eye to the diversity of human competence occasioned by gender, race, or social class? Or if real deficits of human experience and, therefore, capabilities result from being female, non-white, or poor as they clearly do? (Men's competence is eroded by a male dominated morality as well.) What, then, is the educators' response?

To the charges of sex, race, and class bias let me make several replies. My first point is philosophical. The aim of the science of psychology is to find explanations or laws of human functioning that are universal in their application. My impression is that Piaget, Kohlberg, and Loevinger are consonant with this aim. They seek theory of *human* development, not of black, or male, or Jewish development. Sexism and race bias may have operated unconsciously in sample selection (Kohlberg's original thesis sample; Loevinger's initial studies of women's ego development; Levinson's stages of a man's life; or, for that matter, Mead's classic study of girls' coming of age in Samoa). But a theory to explain a thousand people must begin with a single study, even subject. What then becomes crucial is that the epistemology move toward inclusion, more general assumptions, not toward exclusion. It follows that there should be a much greater awareness that excluding certain populations from developmental studies does constitute a grevious error that must not be allowed to continue. The vigor of the contemporary critiques of sex and other biases plus ongoing research with women and minorities suggest the correction in cognitive development theories is already under way. The philosophy of these theories, then, if not the present empirical state, is to generate knowledge of all humans and general universal characteristics in their development (such as more complex thought or language, caring for others, concern for society beyond self, and justice).

A second general response to these charges is empirical. In essence it is a challenge to the critics to come up with a better normative theory. Or, at least, join the cognitive developmentalists in refining theirs. To this point, I have yet to read empirical studies which persuade me there is *not* a universal core to human development. First, the matter of sex differences. A decade ago Kohlberg and Gilligan (1971) published research which made no mention of sex differences in moral development for adolescents, the developmental stage with which my educational effort and this paper are concerned. Erickson (1979), reviewing the research of Keasey (1972) and Turiel (1975), found that "pre-adolescent males and females do not employ different underlying principles in making moral judgments;" that at ages 10 and 13 girls are more advanced than boys, whereas at 16 the boys are "ahead" of the girls (p. 405). Erickson also cites the research of Haan (1975) and Holstein (1973) with college age and mature women in support of a "same stages but different rate of development" analysis. Why a different rate? Looking to qualitative and sexist differences in the opportunities accorded to girls to participate and exercise social responsibilities rather than to sex bias in the theory or test for the

explanation of the erosion of women's competence, Erickson concluded: "When these factors are equalized between the sexes so are the indices of moral growth" (p. 405).

We found no sex differences in the moral judgment of students at Brookline's School-Within-A-School (Di Stefano, 1980). Berkowitz (1981) found no sex differences in his studies of moral reasoning among college undergraduates, nor did Whitely (1982) in his study of freshmen at the University of California. Rest (1979) reports that in using the Defining Issues Test to measure moral judgment: "In 20 out of 22 studies there are no significant sex differences." Snarey's cross cultural data (1982) from four Israeli kibbutz show no sex differences in the moral reasoning of adolescents or those born in the city and living on the kibbutz. So, too, Selman (1980), reporting on his studies of interpersonal understanding, finds "the differences between the male and female samples is insignificant" (p. 187).

Gilligan's recent (1977) contention that women progressively elaborate an understanding of interpersonal responsibility rather than rights as their cardinal moral principle is based on a small sample: Radcliffe undergraduates and women seeking abortions. That hardly seems the empirical base for a definitive theory that *women's* moral development, in general, is structurally different. (Indeed, after claiming that men display more stage 5 thinking than the women, who are predominantly at stage 4, Gilligan and Murphy (1980) write: "Although these differences by sex are not significant statistically, we believe they are meaningful." However rigorous this is as empiricism, it does not lead as I understand it to a better normative theory, unless a morality of love or utility is better than a morality of justice. That is hardly a new debate. What it does make for is persuasive politics.

Let me add that Loevinger encompasses men's and women's ego development within a unitary theory. And the recent studies of adult women (Alexander, 1980; Goodman, 1980; Rabinowitz, 1981; Zubrod, 1980) tend to confirm that the stages of their lives are parallel to those identified for adult men by Levinson.

Second, the matter of ethnocentrism and race bias. Kohlberg's early articles (see, for example, Kohlberg and Gilligan, 1971) cite tables and discussions which show that there *are* cross cultural differences in the rate of moral development. Thus between ages 13 and 16 male adolescents from Turkey and the Yucatan still show a predominance of stages 1 and 2 moral reasoning, with some emergence of stages 3 and 4. Snarey (1982) documents 21 cross cultural studies that have supported Kohlberg's hypothesis that moral development occurs through an invariant sequence of stages. Individuals in those different cultures progress through the stages at different rates and to different end points. In short, differences across cultures in the rate at which universal cognitive characteristics develop *are* to be *expected*. But the spectrum of cultures studied is now sufficiently broad (Eskimoes in Alaska to adolescents in Zambia and Kenya to India and the Bahamas) that the hypothesis of cultural universality of the stages cannot be rejected.

Power (1979) found no racial differences in moral reasoning at the Cambridge Cluster School, when social class was controlled. So too, Selman (1980). "Differences in interpersonal understanding by race with variation in social class controlled were not found to be significant" (p. 188). As for social class differences, those, too, can be overcome by experience. The working-class, city born youth Snarey studied in Israel at ages 12-14 and 15-17 display significantly lower stages of moral reasoning but at ages 18-19 and 20-23 that is no longer the case. Living on the kibbutz, they catch up.

One broad conclusion to be drawn is that the empirical price for reaching to encompass general, universal characteristics in human development is to find cross cultural differences in rates of development that are *much* larger than those found among sub-populations in the United States. In summary, the psychologist part of me is simply from Missouri, until better empirical or normative theories of cognitive, moral, ego or social development come along: for women, for blacks, *for all. At present, they don't exist.*

A third rebuttal is educational. When (not if) more valid, generalizable, empirical theories of human development come along the educator part of me will be among the first to appropriate them. In the acknowledged absence of a complete theory, we have used several theories. Loevinger, incidentally, as frequently as Kohlberg. Our critics seem strangely silent in that connection. Indeed, Loevinger is my developmental theory of choice in educational research. Why? Because her conception of development is the broadest one (including character, interpresonal style, self, cognitive style). Perhaps because its original norm group was women; certainly because hers is the most empirical of these theories.

But for now, rather than change the cognitive developmental theories, we have chosen in our educational programs to change/enrich the experience of adolescents, young women and non-whites included (Griffin, 1971; Mosher, 1981), to promote their competencies apace. No where, incidentally, have we found women or nonwhites "deficient" in development if their social experience and formal education can be made equivalent. That seems to me to be the most promising way to go. An education creating curriculum and pedagogy to overcome arrested development is more scientific, I believe, than one which waits for more complete theory or which constructs a separate notion of development and therefore a separate education for each student. I think it is most useful to hold to an ethic and an education for the *promotion* of *generic human* competencies, whether cognition, morality or ego, in all adolescents, meanwhile remaining open to empirically grounded changes in the ordering theories.

II. Where There's the Will, There's a Way

How may schooling contribute to development? This is the question that will be addressed in this section. But first we need to clarify a few points.

Specifically, Which Adolescents Are We Talking About?

Understood familiarly, those between 12 and 19, in grades 5 through 12; *to date*, more middle class than working; more white than minority; more suburban than urban. Understood in developmental terms, few adolescents who are entirely "pre-conventional" (whose development is seriously arrested); a great majority in transition from Kohlberg's stage two to stage three of moral reasoning, Loevinger's (1979) "delta" to 13, concrete to beginning formal operations--in other words, solidly at beginning conventional stages of moral and ego development; fewer adolescents at Kohlberg's stage four, Loevinger's "conscientious" stage and almost none at "autonomous" stages of development.

"Development" defined how? If "intelligence" is what psychologists measure as intelligence, then the development promoted in the educational research to date refers to gains in pre- to post-scores on Kohlberg's Moral Maturity Scale, the Rest Defining Issues Test, the Washington University Sentence Completion Test, various Piagetian measures of concrete and formal operations and so on. Development typically has meant statistically significant gains on *several* of these tests (one-third of a stage gain, the so-called "Blatt effect," being common in moral education programs; somewhat greater gains of one-half a stage in ego development being typical, with the promotion of Piagetian cognitive development more the exception than the rule). Only about half the adolescents in the experimental programs show such development, however, and it is often clearest for those "naturally" in transition to beginning conventional stages. Of all this, more presently.

Development can also mean more than these primary measures capture. For example, we have recently studied the development of group moral and prosocial norms in several alternative schools where adolescents have had extensive opportunities to participate in self-governance, the school's discipline and judicial processes and in creating school community. One seeming trend is that these schools have *less* effect on students' individual moral reasoning than does formal classroom instruction in moral education but *more* effect on consensual agreement as to what rules, rights and practices will actually prevail in the school. Further there is some indication that students who participate in these ways think more deeply about their education and are more prone to commit themselves to political and social action

in their local communities. These indices of development are more persuasive to parents and most educators than are gain scores on psychological tests. And if it is not rejected out of hand by an audience such as this, there is considerable anecdotal, "clinical" evidence from teachers, students and observers that participation in such programs is associated with greater maturity.

A qualification. In what follows, I am not going to make an exhaustive review of all of the studies bearing on curriculum and programs in secondary school that can positively influence adolescent development. I doubt I was asked to do that. What I hope makes most sense is to analyze some of the curricula and programs I know best which have promoted growth and to abstract from them their promise and paradoxes. I suppose I've devoted as much effort, intellectually and practically, as anyone to the task of creating and evaluating education for adolescents' development. I think I know where both the gold and the bodies are buried. I'll try to dig up each. And, fundamentally, I see the curricula and programs to be reviewed as "first-generation" studies: to be analyzed, dissected, "mined," for what we may learn from them and as the basis for more sophisticated second-generation studies.

A brief overview of what is to come is in order. First, I will describe curricula which have promoted adolescents' development in conjunction with the teaching of the existing subject matters. Then I will examine courses designed to affect adolescents' growth as their first order of business. How powerfully the "hidden curriculum" of the high school (its governance, judicial and social structure) impinges on the development of its students increasingly has become clear in our work. What happens when it, too, becomes a part of their intentional education will be discussed. Throughout, the vital influence teachers and parents have in all of this will be considered.

A Trojan Horse: The Disciplines and Development

Adolescents' development can be pursued in common cause with the teaching of the subject matters. Although more discipline or subject matter than development typically gets taught in school, there is evidence that school programs that combine subject matter with development can have positive experimental effects on adolescents' cognitive, moral and personal development. Speaking very pragmatically, I doubt that, at present, a concern for adolescent development will go anywhere in secondary schools if it doesn't form a partnership with the subject matter curriculum. The latter is so entrenched and parent demand for its stiffening is so omnipresent that an alliance, holy or unholy, is a *sine qua non*. At least two conclusions are possible: forget the whole idea of

development or learn to walk and chew gum at the same time. My experience is that many teachers will be interested in the case for teaching both the disciplines and development well. (Elementary school teachers, incidentally, put development first, subject matter second. In the junior high school, it's a dead heat.) Let's see what results when subject matter is paired with cognitive and moral development.

First, in the promotion of Piagetian, formal operations. Renner and Lawson (1979) report: "Our research has shown us that the level of thought of junior high school students and college freshmen can be changed by providing them with inquiry-centered experiences in science" (p. 359). They believe the principal reason their research succeeded was that it taught, rather than assumed, competence in abstraction.

> We accepted that most of them [the students] participating in the experiments were concrete operational. That put squarely upon us the responsibility for providing concrete experiences with the objects and ideas of the discipline...actual involvement with the materials and ideas of science and being allowed to find out something for themselves account for the movement forward and into formal thought we found (p. 360).

Renner and Lawson identify the essence of a pedagogy for teaching formal operations thinking. It includes: isolating concepts at the core of the discipline; finding laboratory investigations which will enable the student to inquire into and develop an understanding of the structure or core concepts of the discipline; and then assuring that students, using the laboratory as a nerve center, actually do inquire. To that end the teacher asks questions and presses students for what the data may mean. How much of the adolescents' formal thinking the teacher actually does for them is unclear: "He [the teacher] also makes the necessary conceptual inventions at the proper time [and] decides when discovery can take place and when the present concept needs to be related to the next one by exploration" (p. 360). In my understanding, making the necessary conceptual inventions and discovery, on the students' parts, are of the essence of emerging formal operations. My sense also is that the trail of abstraction from eleven pieces of fruit in a bowl to the concept of the number 11 to its numerators may also be constructed by adolescents who, in Dulit's terms, are "inspirational" thinkers. I doubt Renner and Lawson would disagree. They simply are arguing that if we want adolescents to be competent in scientific, hypothetical, deductive thinking, then the physics and science lab in general, coupled with inquiry teaching, are powerful pedagogical tools to promote such understanding.

I want to digress for a moment. Broughton (1979) argues that Piaget and Piagetian educators have confused the kind of mathematical-scientific thinking needed in the counting houses of Zurich or in Silicone Valley in Palo Alto with the highest form of human intelligence. Rather than being a psychological and developmental truth, "formal operations" in fact derives from a capitalistic historical milieu and represents at best "a partially true construct," at worst, an alienation and caricature of human reason. Broughton urges that we not reduce our cognitive picture of adolescents nor of their education to idolatry of logic and narrow, scientific, technological thought. I believe his arguments are crucially important ones. Nonetheless, anyone who watches the majesty of a 747 lift off against an October sky or who lives as close as I do to a "high technology alley" cannot but be impressed that this kind of thinking, ideology aside, is enormously valued and functional in this society.

Perhaps falling exactly into the trap Broughton warns against, I suspect that some of the most interesting and challenging research at the intersection of developmental psychology and education in the next decade will be on how, by education, intentionally to promote formal operations. My impression is that there is much international interest in teaching adolescents to think abstractly. Assisting in the construction of rationality seems to me to be indisputably a central function of education. The disciplines and the developmentalists can find increasing common cause here. And I candidly doubt formal operations will prove any more intractable to sophisticated developmental education than "nonacademic" adolescent competencies such as morality, ego and so on (see Gallagher and Noppe, 1976; Keating, 1980).

The disciplines and moral development. Kohlberg (1980) reports one of the classic studies to date of the potential of the disciplines to promote moral reasoning in adolescents. This was the Stone Foundation project, which studied the effects of combining the discussion of hypothetical moral dilemmas with teaching Fenton's Carnegie-Mellon social studies curriculum in ninth grade civics classes. The experimental group was made up of over 20 high school social studies teachers, teaching this combined curriculum for one academic year. The students' pre-tested and post-tested moral stage scores were compared with the scores of students in control classes in which the same social studies curriculum was taught but there were no moral discussions.

The results demonstrated clearly that moral development can be promoted in an academic discipline. The control group showed no upward moral development over the course of the year. In half of the experimental classes, there was also no change. But in the other half, "one-quarter to one-half of the students moved significantly toward the next stage during the academic year" (Kohlberg,

1980, p. 50). This constituted a replication of the Blatt effect, which holds "that one-fourth to one-half the students in one semester. . .discussion groups will move partially or totally, to the next stage up, a change not found in control groups" (Kohlberg, 1980, p. 50).

This study was also useful for demonstrating the importance of three elements for promoting moral development: the curriculum, the composition and characteristics of the students and classroom, and the teacher's instructional behavior.

> The essential curriculum element...was controversial moral dilemmas in areas that would arouse disagreement between students or "cognitive conflict" in choice. The central element in student or classroom composition was a mixture of students at different stages, thus exposing students to peers at the next stage above their own. The central element in teacher behavior was an open but challenging position of Socratic probing.
>
> The Stone project indicated that each of the three elements had to be present if any change were to occur. With regard to curriculum, the Stone project demonstrated the necessity of controversial dilemmas. In the control classes without dilemmas, no change occurred. In the experimental classes with dilemmas, more change occurred in the classes that discussed 20 dilemmas than in those that discussed only 10.
>
> With regard to student and classroom characteristics, the Stone project comparison of "change" and "no change" experimental classrooms indicated one significant difference. The change classes all had mixtures of students at two and usually three stages; the no-change classes did not.
>
> With regard to teacher instructional behavior, the Stone project indicated the significant difference between teacher behavior in "change" and teacher behavior in "no change" classrooms. All teachers in the classrooms in which students changed used extensive or Socratic probes of reasoning: they asked for "why's." Most of

> the "no change" class teachers did not. This difference in use of Socratic probes was the only item in a 100 item observation schedule of teacher behavior that differentiated the "change" and "no-change" classes at a statistically significant level. Socratic probing, then, was central to teacher behavior in cognitive-developmental moral education (Kohlberg, 1980, pp. 50-51).

The analysis here of the elements making for positive influence on adolescents' moral development is very straightforward. The elements include:

--subject matter (in this case social studies; it might equally be English, biology or civics) adapted to include controversial moral dilemmas, and more dilemmas rather than fewer;

--adolescents at different stages of moral reasoning (which seems most likely to benefit those at lower stages; what to do for the relatively few kids already reasoning at Stage 4 is a puzzle);

--teachers who challenge adolescents' thinking, who ask why.

Couple this with Renner and Lawson's case for the science lab and serious student inquiry. None of this sounds very radical. *Au contraire.* It describes the classically excellent or "master" teaching we have all experienced, albeit too infrequently. But certainly not teaching as telling nor preaching.

I shall return to the important influence teacher characteristics have both for developmental curricula and adolescent growth later. Let me add here that the pedagogy Kohlberg describes for promoting moral reasoning has been extended to other subject matters in the high school: for example, English, American literature, the biological sciences (see Sullivan and Dockstader, 1978; Fenton, 1980; Garrod, 1977). The cumulative data of such studies tend to support average gains of one-quarter stage in moral reasoning following a semester-long course. The point is that there seems no hypothetical reason why similar modest effects on adolescents' moral thinking cannot be accomplished in virtually all subject matter taught in the high school.

Development in the Fast Lane

To date, adolescents' development appears to have been furthered most dramatically in specially designed developmental courses. I intend to describe three which I regard as exemplary of a broader genre. They are Lois Erickson's psychological education for women,

Norman Sprinthall's high school curriculum in psychology, Paul Sullivan's curriculum in moral education.

A curriculum to promote women's development. Lois Erickson received the American Personnel and Guidance Association's 1976 research award for her curriculum to promote women's development, beautifully subtitled: "From Iphigenia to Antigone." Erickson (1979) saw a major issue, the erosion of women's competence, which begins at least as early as junior high school, and combined developmental theory and educational practice to explain how this was happening and how it might be ameliorated.

> Field interviewing of girls and women across the life span provided the significant experience of actually viewing the process of women's development through different ages, stages and tasks. This practicum experience was coupled with seminar sessions to further examine, reflect upon and integrate the experience on a personal level...[The seminars] were also used to reflect on current articles on sexual stereotypes, language and inequality, the equal rights amendment and selected roles of women portrayed in literary works. The attempt was made to provide a historical as well as a developmental perspective of women's rights and roles. Play readings and short stories were selected... Katherine in *The Taming of the Shrew*, Laura in *The Glass Menagerie*, Elisa in Steinbeck's *The Chrysanthemum*, Nora in *A Doll's House* and finally, the sixteen-year-old Grecian princess, Sophocles' Antigone, were examined...(pp. 408-409).

Erickson's evaluation of the effect of this curriculum on development was a formative one employing several criteria, including the Kohlberg and Loevinger measures. She found that the students' average moral maturity scores increased from 304 to 346 (approximately half a stage) after the one-school-quarter-course. This is a high octane version of the Blatt effect. A year later, the average moral judgment score was 382, which represented growth of about 3/4 of a stage. Thus the average young woman who had taken the course was then reasoning at Kohlberg's stage 4, which in all of our studies emerges as a developmental "ceiling" for American adolescents. It is especially important to note Erickson's comment "that Stage 3 as a stable adult stage of development for women need not hold" (p. 411).

Ego development was a major goal in Erickson's research. It was realized: "A significant shift from Stage 3 (conformist) and

Stage 3-4 (transition from conformist to conscientious) toward Stage 4 (conscientious) and Stage 4-5 (transition from conscientious to autonomous) occurred during the one-quarter curriculum" (p. 411). Continued development, relative to control classes, was found a year later. Erickson has since followed her original subjects. She finds that their ego development continues to progress. What this implies is that a little bit of education for development may go a long way.

Erickson drew three conclusions:

> First...it is possible to promote psychological growth in a regular school class...Second, it is possible for counselors [and teachers] to link [curriculum and teaching] to a given theoretical position...the concepts of cognitive-developmental stage theory...Third, women stabilize in personal growth areas earlier than men...This study [is of] an intervention mode that will promote movement from conventional toward principled morality and from external toward internal sources of ego in adolescent females (p. 413).

Adolescents as counselors. Another example of a curriculum which promotes adolescent development is Sprinthall's Psychology of Counseling course. Indeed, this is where the deliberate effort to educate for human development had its neo-progressive beginnings in the late 1960's. We (Mosher & Sprinthall, 1970) began a straightforward, if rather "hip," effort to teach high school students in Newton, Massachusetts to counsel. This was a time when "hotlines," "peer-counseling," "drug counseling" were new. Much research is serendipitous. The spore for penicillin floats through an open window into Fleming's laboratory. We used several developmental measures as part of a formative evaluation. We found, to our surprise, that adolescents learning to counsel were developing in moral reasoning. This was the "Blatt effect" without either Blatt or formal moral discussion. Only later did we understand the relationship between systematic training to understand another person's ideas and feelings (i.e., empathy); taking a "client's" perspective; trying to help another adolescent's pain and confusion or in the resolution of "real-life" dilemmas (e.g., drug usage, sexual and interpersonal relationships) and the furtherance of the helper's own maturity.

Sprinthall (1979) subsequently systematized and elaborated these early findings. His objectives in the psychology courses the Minnesota group created were two-fold (p. 367): "(1) to increase the level of psychological maturity of the pupils and (2) to teach particular psychological skills." The research setting was a Minneapolis public high school: 20 percent minority, 60 percent college-bound.

The course in counseling began with a personal introduction by each student. This was difficult for the adolescents, despite their intrinsic interest in themselves. It did immediately personalize the class and the teacher. The adolescents were then taught, as are beginning counselors, to listen to another person's feelings and ideas and to practice actual responses. "We emphasize the two-stage nature of these learnings, (a) to accurately pick up, hear and identify content and feelings, and (b) to frame a response, 'using your own words which communicate to the role-play client that you do accurately understand the message'" (p. 371). Interestingly, high school students, despite their compelling wish to communicate with peers, and the billions in profits "Ma Bell" makes on their endless telephone discussions, initially miss both the meaning and the feeling in communication with others.

The counseling course, after examining non-verbal communication, turned to reading assignments on counseling; to the study of films of actual counseling and to written assignments. Concurrently, the adolescents' practice of counseling shifted from role plays to the "real life" concerns of the class members:

> The range of issues was substantial from one student expressing anger over being falsely accused by a teacher of stealing a book, another concerned over the loss of her dog, to yet another who had an overprotective mother and felt suffocated. Students had the opportunity to both counsel their peers and be counseled in turn by these same peers (p. 375).

Toward the end of the class, emphasis was given to a wider use of the counseling skills, and precautions in so doing. Audiotapes of discussions with friends were made. The responsibility that accompanies the use of "active listening" and helping others was emphasized. Clearly, the students were learning directly that adolescents and their problems are complex and helping others equally so.

The counseling classes had several positive influences on the adolescents. In the beginning these students were deaf both to the content and the emotions associated with what others said to them. At the end of the course the students trained in counseling scored higher than practicing therapists in their responses to an actual therapy transcript! This rather unnerving finding was supported by their responses to videotapes of coached clients. Positive effects on their moral and ego development were found in both experimental classes. In brief, "the movement was from Kohlberg Stage 3 to 4 and Loevinger Stage Delta and 3 to 3-4" (p. 378).

Sprinthall also talks about the essence of teaching psychology to influence adolescents' development:

> We found the most effective procedure to be the practicum format usually employed in graduate schools...we wanted to teach...psychological development. We sought to avoid passive, rote and impersonal learning. When a teenager knows he will teach a class of elementary age pupils, or run part of a nursery school program or counsel another teenager, the immediate motivation for learning is high--active responsibility versus passive observation is one way to describe the difference. A second major component was the seminar...Each is designed as an intensive examination of the meaning of the experience for the teenager as well as a discussion of the requisite skills (p. 381).

The teaching also introduces genuine disequilibrium: "A fast talking, advice-giving, dominating teenager hears himself on tape and sees the adverse reaction upon a fellow teenage 'client.' There is resistance to such personal glimpses and awkward insights. This is also the opportunity for important learning" (p. 382).

A ground-breaking curriculum in moral education. If Blatt (1970) "launched cognitive-developmental moral education," Paul Sullivan (1980) may be said to have run its first 4-minute mile. Working at Newton High School, he created a curriculum for adolescents which was significant in many ways. It lasted a year; it incorporated a diverse set of experiences, from moral discussion to the study of moral psychology and philosophy; and, in particular, it took students across the bridge from the discussion of hypothetical moral issues to direct participation in the rule setting, disciplinary-adjudicative processes of the high school. Further the positive influence the Sullivan course had on the development of *all* its adolescent participants was remarkable.

The course itself was divided into four basic phases. The first "involved the formal discussion of moral issues. Films, novels, plays, television shows all provided rich sources of moral conflict...The objective...was to have students discuss moral dilemmas, examine their own reasoning and to interact with other students and the teacher's thinking" (pp. 166-167). The second phase of the course involved teaching counseling skills to the adolescents. Sullivan's students were to need empathy and listening skills, when, later, they led moral discussions with younger children. Various aspects of moral philosophy also were discussed, for example, Kantian theory, hedonism, and utilitarianism. Not quite advanced placement philosophy, but serious philosophy certainly. Phase 4, the practicum, involved the students in two separate projects. One was leading moral discussions in elementary classrooms in Newton. "The other was the creation of a Board of Appeals for disciplinary and justice questions within the

high school" (p. 176). Earlier, Sullivan had raised the issue of how just or unjust Newton High School was. Students, initially pessimistic, became energized to create a Board of Appeals and its rationale. They were successful in getting it constituted and operational.

Sullivan evaluated his class in comparison to two control groups--one in psychology, another in science. The experimental group gained an average of almost half a stage on the Kohlberg measure, and all students grew in moral reasoning from a low of 25 points to a high of 72 points. A mean change of almost a full stage from the conformist to conscientious levels on the Loevinger measure also occurred. The control groups evidenced only nominal change in their moral reasoning or ego development during the year.

Sullivan believes these effects occurred because the curriculum provided a forum for the students to consider moral issues and interact with the more complex arguments of other people. His pedagogical conditions for growth are very close to those Kohlberg identified earlier in connection with the Stone project, with a notable addition:

> Creating a Board of Appeals and being moral educators were especially important for the students' moral and ego development. The adolescents had the experience of being responsible, respected competent people with significant social roles. They acted as well as thought.. They became teachers and had to deal with all the role conflict that engendered... In creating the Board of Appeals at their own initiative they further asserted themselves as responsible members of a social institution, working to revise the rules of the system and make it more just (p. 186).

And another important confirmation. Them that acts, gits. "Those who participated most actively and took part in the practicum showed more development on both measures. This was consistently true for members of the experimental group" (p. 187).

How did it all happen? Sullivan confirms the emerging portrait of some of the conditions in high school curricula which can make for positive influence on teenagers' development.

--The first aim is development; the designer's eye is firmly fixed on the students' development, both existing and to be.

--The teachers and curriculum developers have knowledge of developmental psychology.

--The course materials and experiences are selected because they are likely to produce growth of one or more adolescent competencies. For example, developmental psychology suggests that hearing ideas one stage "higher" than his own, experiences of social responsibility, participation in school governance and so on may be broadly facilitative of growth.

--The student is exposed to the reasoning of one stage higher than his or her own, which implies having a mix of developmental stages in the classroom.

--The teacher uses Socratic probing of "real" content.

--The teaching introduces genuine disequilibrium.

--From the teacher there is explicit respect. Teachers expect high school students to take their subjects dead seriously: physics, American history, athletics. Why should they not, as Sullivan did, take students' needs to be responsible, respected and competent people, equally seriously?

--There is the opportunity for the students to do, to apply what is being learned to one's own life and to agency in the school, for example, as a student teacher or a member of a school judiciary committee. The opportunity for substantial participation and responsibility seemed to be a key for the young women in Erickson's study. Student growth was very much in proportion to the students' participation in their immanent social institutions. Seminars required students to reflect on, to make personal meaning, of what they were doing, whether interviewing mature women, counseling peers or teaching children.

The case that education can positively influence adolescent development could stop here. Of course, there are major scholarly and practical problems generalizing these experimental effects to many teachers, curriculum areas and diverse groups of adolescents. The actual consequences of the personal development measured in these studies to individual adolescents or their behavior in school and out of it are really not well-known (Masterson, 1980; Travers, 1980). The next sections turn to some of the many unanswered issues. But I, at least, believe we know enough to begin to promote critical adolescent competencies (intellectual, moral, ego, emotional) *if* there is the will to do so. And that is a big "if."

A Common Cause

Our educational research has also begun to investigate how the school and the home can cooperate to promote child and adolescent development. As noted earlier, I always have believed that youth

development is too important to be left to the school alone. Indeed, the singly most dramatic effect on children's development in our record book was that accomplished by Grimes in common cause with parents.

Grimes (1974) educated the mothers of fifth and sixth graders in Piagetian and Kohlberg theories of moral development and in moral dilemma discussion. She then involved them and their children in discussing moral dilemmas: hypothetical ones, those in the novel *Sounder*, and dilemmas introduced by the children themselves. Her experimental group involved trained mothers; her control group did not. Grimes' fifth and sixth grades began at stage 2. All but two children in her experimental class progressed to stage 3 at the end of the intervention, an average gain of over a half stage in moral reasoning. Students in the control class made only about half that progress. A third control class in which there was no moral dilemma discussion showed no growth in moral reasoning. Grimes believed the striking effect was the result of the mothers' conscious participation in moral discussions with their children--discussions, incidentally, which did not end at the school room door. Her pioneering study was a classic illustration of "giving away" to parents whatever specialized knowledge the educator has of childrens' development and how to promote it. That seems one viable way for schools to empower parents.

Stanley (1980) and Azrak (1980) extended Grimes' initiative to educational programs for parents which had, as part of their aim, promoting the moral development of junior high school and adolescent students. I will concentrate here on Stanley's research since it was with high school adolescents and their families. Stanley (1980) describes her assumptions and purposes:

> If a child perceives his family as being fair, and if conflicts involving members of the family are resolved equitably, he will have experienced significant role-taking opportunities and discussion of the right, wrong or fair thing to do. Further, these experiences should stimulate the moral development of the child. No one has yet attempted to teach families methods of inductive discipline and problem solving with the purpose of evaluating the consequences for the moral development of the children. This study did that. The purpose was twofold: to investigate whether a course that taught families democratic methods of resolving conflicts and establishing rules would affect the moral atmosphere of the family itself; to investigate whether such a course would stimulate the moral reasoning of the adolescent participants (p. 343).

The course was taught in high school in a working class community in Massachusetts. Participants were volunteer ninth and tenth grade students and their parents; only families in which all members agreed

to participate were accepted. The families were then divided into three groups: A (experimental) with ten parents and seven adolescents, all of whom participated in the course; B, composed of twelve parents and six adolescents, with the parents *only* participating in the course; and C, a control group. The families were predominantly lower middle class with the occupations of the parents ranging from skilled labor to nonmanagerial white collar jobs.

The course met for two and a half hours a week for ten weeks. Its contents were influenced by two models of parent education: "Adler's concept of the family meeting and Gordon's problem solving method were, in particular, seen as potentially effective ways of helping families develop and live by more just rules and agreements. . . . Both are based on democratic procedures for resolving family conflicts" (Stanley, 1980, p. 344).

The course had four elements in its curriculum. (a) Communication skills: "discussion of how family members talked with one another, particularly about rules and conflicts; and the teaching and practicing of the skills of empathic listening and of confrontation" (p. 344). (b) The family meeting, as a way of promoting more democracy in the family and providing participation, particularly for adolescents. The family meeting served as a forum for communication, information sharing, planning family events, and making decisions about family matters such as use of the car. It also served as a forum for "dealing with recurring problems and conflicts away from the heat of the moment. It would be a move toward participatory democracy in which each individual has a full and equal role. We explained that there would be less need for punishment because people are more likely to carry out jointly made decisions" (p. 347). (c) A democratic approach to conflict resolution based on the work of Gordon (1970) which in essence entails defining the problem, brainstorming solutions, evaluating them, deciding on a solution by consensus, establishing procedures (who will do what and when) and a follow up (how well does the solution work?). (d) Training in how to handle conflicting values in the family.

Stanley evaluated three effects of the course: the parents' attitudes toward family decision making and child raising, the actual process of decision making in families, and the effect of the course on adolescents' moral development. She found, first, that parents in both of the classes (with and without their adolescent children present) significantly increased their egalitarian attitudes toward family decision making. Interestingly enough, only those parents whose sons and daughters were *not* taking the course with them became significantly less authoritarian on the Parental Attitude Research Instrument. Second, she found that "families in both groups substantially improved their effectiveness in democratic decision making . . . . An analysis of the tape recordings of the family meetings led to the same conclusion" (p. 353). There was a significant decrease in the number of authoritative statements made by parents participating with their children.

Further, these parents did significantly more reflecting and summarizing of what others said. Third, she found a significant gain in levels of moral reasoning by adolescents in group A (participated with their parents) but not group B (only parents participated). In a follow-up assessment a year later, "the moral reasoning scores of Group A continued to rise while Group B showed no significant change" (Stanley, 1978, p. 353).

Stanley believes that teaching the family meeting and the Gordon model for conflict resolution were the curriculum components most crucial to the changes she found. She says many parent education programs rely primarily on lectures and discussions. By contrast the supervised practice for parents and adolescents in communication skills, family meetings and conflict resolution was vital, in her view, to the participants' growth. Further, if one's aim is to affect the behavior of parents and the development of their adolescents, include them both in the educational program. Oil and water can mix. If the aim is to change parent attitudes, leave the teenagers home. Significantly, also, families which learn together continue both to meet and to grow. In group A all but one adolescent showed further gains in measured moral reasoning a year later. All of these families were holding meetings at the time of the follow-up, only a third of the group B families were doing so. Stanley acknowledges the facts of voluntarism, nonrandomization and the working class background of the families in her study as limits on its generalizability. Savage (1980) has recently confirmed Grimes' findings with working class, minority parents in San Diego, although their childrens' moral development, while significant, was less dramatic.

Nonetheless, Grimes', Stanley's and Azrak's studies suggest that it is possible for the school to cooperate directly with parents, with substantial positive effects on the development of children and adolescents. Parents and the family itself may be changed positively by school-initiated educational programs. The philosophy of developmental education has always been to involve parents as active partners in such programs aimed at child and adolescent growth. That many of our efforts to do so through the school's adult education courses were met with parent apathy is a sobering fact. Stanley, Azrak and Savage suggest there are ways effectively to reach parents and families. They require will, serious effort and constructive out-reach by qualified school personnel. Where development is concerned, nothing comes easy.

The Teachers As a Source of Effect on Adolescents' Development: Pygmalions in the Classroom

Chris Argyris and Joseph Reimer have been very blunt in saying that one of the mistakes the Boston-based developmental educators have made is to overlook, or seriously underestimate, the important effects of teacher characteristics on students' development. Kohlberg (1980) believed the Stone research established that gains in students' moral

reasoning were independent of the personality qualities of the teachers, "such as being at the highest, or principled, stage themselves" (p. 51).

I have commented elsewhere (Mosher, 1978) on how adolescents and their teachers at Brookline's School-Within-A-School understood and created self-government, a disciplinary code, adjudication processes and school community very consistent with the broad moral, social and relational premises of Kohlberg's Stage 3 and Loevinger's conformist stage of ego development. How all this got "in the way" at both the Cambridge Cluster School and in Brookline of those of us who aspired to create "democratic" or "just" high schools has been the subject of some recent looks back in anguish by Kohlberg and me (Kohlberg, 1980; Mosher, 1980). The fact is that, at least at S.W.S., I did not give sufficient attention to the teacher education requisite to operating a "democratic" high school, despite the relative care given earlier in Brookline to training teachers in the psychology, curriculum design and pedagogy necessary to implement a curricular program in moral education (Sperber & Miron, 1980; Zabierek, 1980).

But what if the teachers' stage(s) of development do have something (or much) to do with how they understand adolescents, their growth, the contributions education may make to it, the practice of school governance or of how just a high school is? Harvey, Schroeder and Hunt's research (1974) has supported the thesis that teachers at higher stages of development function in more complex ways in the classroom, are more empathic, respond positively to individual differences in children and employ a wide variety of teaching methods. Walter and Stivers (1977) found a clear relation between Eriksonian stage of identity formation and teaching performance with a large sample of student teachers. If these findings hold, then education to promote teachers' development may have genuinely permanent effects on the high school and its students. New curricula come and go, as do educational priorities: "special" education, bilingual education, education for the gifted, moral education and so on. Teachers, however, increasingly are staying. Enhancing their development could be the tide that lifts all boats.

The Minneapolis group of developmental educators, under Sprinthall's leadership, have taken these premises about teachers and their effects on adolescent development very seriously. Apparently there is life after 25 in the teacher's lounge. This group is finding that it is possible by sophisticated in-service education to promote teachers' moral and conceptual development (as measured by the Hunt Conceptual Level Test) but not their ego development. Further there is carryover to their teaching behavior, as measured by the Flanders Interactional system (Oja and Sprinthall, 1978). The "smoking pistol" link of all this to actual student development has yet to be closed empirically. That cries out to be done.

In summary, it is very hard to believe that adolescents' development is teacher proof. As to how what is in teachers' heads, hearts, and consciences passes to kids, much needs to be known. But pass it most certainly does. Oja and Sprinthall (1978) say:

> The concept of cognitive structural change, the process through which humans move from the less complex to the more complex in a variety of developmental domains, remains a compelling framework for our work. The classic diction in education states, "As is the teacher, so is the school." Perhaps in the future we can say, "As the teacher becomes, so the schools grow" (p. 132).

And, I may add gratuitiously, so too, the adolescents.

The High School Per Se and Its Effects on Adolescent Development

What institutional processes, other than the curriculum, instruction and the teachers, affect adolescents and their growth/learning in the school? So far, we have examined exemplary curricula, teaching and, to a lesser degree, teacher and student characteristics which promote student growth but which leave the "structure" of the school little changed. What if we examine what Sarason (1971) calls the constitution of the school (i.e., who makes school policies; who decides on academic policy and standards; discipline, sanctions and so on); or the school's "pride" in certain programs and students as over against others (what students participate in what activities, etc.)? The point is that, once confronted, the educator cannot be blind to the powerful potential effects (by no means all positive) the high school as a political, bureaucratic, social, judicial, valuing institution has on adolescents' development. They learn from this "hidden curriculum" that they have, or don't have, rights, a voice, worth; that they are individuals or I.D. numbers; that they belong--as outstanding students, athletes, cheerleaders--or that they don't--they're greasers, animals, "Point kids" (Irish Catholics) and so on. Political, social class, moral education thus goes on pervasively in the high school's everyday operations. Its effects may be magnified because it is so covert; development, then, can't rest its case at the classroom door. Yet, if one is troubled by the impact of this tacit curriculum, try rationalizing it. More particularly, try positively to promote adolescents' development on a social and institutional level.

As a developmentalist one does so on the general Piagetian premise that the adolescent's reasoning and action matches the structure of his particular social world. He thinks, and probably does, as those around him do. Cognitive operations develop in response to, and in order to adapt an individual to, her environment. Rationalize the social environment in certain ways and they become part of the understanding of adolescents. Reimer (1977), for example, in his studies of a kibbutz high school in Israel, showed how the predominantly

social world of the kibbutz called forth the construction of higher stage moral reasoning to adapt the individual to that environment. So the psychology apparently "works." The educational issue then becomes how, and how much to restructure the adolescent/high school society.

Democratic School Research

On this issue of restructuring the adolescent society in high school I have some scars to share. Not only are they disfiguring to my image as an omniscient, successful developmental educator, there are still some painful adhesions. Kohlberg and I both aimed too high. His goal was "a school in which justice is a living matter" (1980, p. 305). And I followed Dewey (1950) in believing a "democratic high school" was the educational institution most likely to nurture adolescent development. That's a heady goal, and philosophic justification for adolescent development through democratic schooling.

Both visions--a just high school and a democratic high school--were beyond their immediate authors in some degree. Certainly, they were beyond the initial comprehension of the teachers and the adolescents whose lot in Brookline and Cambridge it was to translate them into practice. The students did not rush to embrace changes in their society. For my part in an alternative high school of 100 adolescents, predominantly white and middle class, I swam against the strong undertow of "students and faculty who create qualitatively different democratic schools or just communities depending on the predominant stage of the students' moral and ego development" (Mosher, 1978, p. 106). And I surmise Kohlberg's experiences in Cambridge with 75 racially mixed adolescents in the Cluster School were not greatly different.

Our efforts to translate these constitutional, social and moral principles into the understanding and actions of several hundred adolescents are described extensively elsewhere (Mosher, 1980). I will make no attempt to review the details of these programs here. Let me simply abstract that the adolescents in both schools were given many opportunities to participate in their governance and policy-making, in creating rules and adjudicating one another when they broke them, in building the school as an adolescent community. In the Cluster School special emphasis was given to community address to the every day moral issues facing its members: stealing, drug usage, racism and so on. In Brookline's School-Within-A-School, political and social participation, more than moral discussion were nurtured.

Both Kohlberg and I adjusted our sights over time. He came to advocacy/education for Stage 4 (Kohlberg, 1980):

> The [Kibbutz] adults, as parents, and especially as teachers, however, practice an indoctrinative moral

> education of the young based on example as well as preaching...only a minority of adults reach the fifth or sixth stage of principledness or of philosophic morality. But like Plato's Republic, all its adult citizens are active in thought and deed on behalf of fourth stage conceptions of the common good. Even the children from disadvantaged and troubled backgrounds who go to the kibbutz high school eventually attain and practice fourth-stage good citizenship as kibbutz members. In working with alternative teacher advocates, our practice evolved into something closer to the theory of the Republic, of Durkheim, of the kibbutz than of the Socratic theory (p. 56).

In Brookline, my position was that (Mosher, 1980),

> we needed education (of which democratic schools might be the most sophisticated form) to stimulate the all-around development of students. School democracy seemed a possible way of organizing education to accomplish *multiple* developmental effects. Its provisions for student participation in school governance, in creating the school's programs, and its sense of community meant a 'hidden curriculum' more likely to promote general growth than did traditional education. Or, at least, that seemed a promising possibility (p. 28).

Reimer and Power (1980) point to another problem facing developmental educators who try to create social and school structures to pace adolescent growth. Put bluntly, they say we don't know how to translate our visions so that adolescents or teachers may comprehend and behave accordingly. There is overreliance on normative discourse and exhortations as to what should be. Meanwhile, too little practical inquiry is given as to how to achieve goals to which all seem to be agreeing (e.g., integration, reduced drug usage, and so on).

What influence did these two schools have on their students' development? First, the effect on individual moral development was less at both Cluster and S.W.S. than in the classroom courses described earlier. Gains in Cambridge averaged 15 moral maturity points per year, with no control data reported (Power, 1979). S.W.S. students regressed from beginning to end. Community norms did emerge in both schools. For example, at Cluster there was progressively less stealing and cutting of classes. But the students' commitment to social and racial integration and "cooling" drug use declined.

Travers' (1980) questionnaire data from S.W.S. suggest other, more positive, effects.

> In summary, the S.W.S students think more critically about school than any other group at Brookline High. They have a high degree of intrinsic motivation to learn...they recognize inequality of educational opportunity around them; they seek more influence in decision making about their curriculum, disciplinary rules, grading... In all of these attitudes toward school they are significantly different from the average student at Brookline High.
>
> Second, S.W.S. students are moderately more critical of government and the political system than are other students at Brookline High. Comparatively speaking, they are already thinking citizens. Third,...S.W.S. students participate to a degree unusual for Brookline High School students in political and social action in the community. At the political level that tends to translate to support for local candidates for city government...there is no general political action at the state or federal level.
>
> The forms of social action by S.W.S. students vary: from environmental issues such as save the whales to antinuclear and antidraft protests, to Zionism. Incredibly enough, most of the political and social participation in the whole high school (circa 2,300 students) comes from S.W.S. (100 students). Membership in S.W.S. is much more likely to predict participation than are the student's academic track or socioeconomic status. In 1970, these factors, in order, predicted a student's degree of participation. On the other hand, there is no evidence that S.W.S. students are affecting other [students]... to go and do likewise (p. 295).

So what have I learned, in general, about creating alternative schools that incorporate direct learning of ideas and behavior considered desirable for adolescents? A number of hard earned premises. First, it seems to me essential to be very clear about why one is creating such institutional experiences. Are we interested in promoting adolescents' all-around growth or their academic development, cognition (and of what?), political skills, moral thought and action, educational ideology and so on? What institutional experiences--existing or "new"--may lead to what teenage competencies? In the case of the "first generation" studies of just and democratic high schools, Kohlberg and I had to invent the idea (in my case, reinvent Dewey), work out the school practices and concurrently settle on a research design. Speaking for myself only, if one is not sure where he is going it is a little difficult to know if, or in what condition, he has gotten there.

So all the hard thinking possible in advance about what a program for aesthetic, or vocational or social-moral development will be, in practice, is essential. Don't expect the program to "fall together" once you get out in the school. In these collaborative ventures teachers, by nature, do, and adolescents aren't educational philosophers at first. So who is there to say, directly, that the Emperor has no clothes, especially if he is a Harvard, a Minnesota, a Wisconsin, a Boston University professor? "School democracy," "political and social education in the community" are heady ideas. It is easy to be stampeded by them. The point I am reiterating is Reimer and Clark's caveat that the developmental educator is seriously hoist in realizing such aims by the fact that he has so little pragmatic (or personal) knowledge of how a community of adolescents can be just, integrated, caring self-governing, artistic or what have you. If nothing else, a decade of applied developmental education with adolescents may have provided some prototypes.

Second, the teachers with whom we collaborate need to understand the essential ideas and whatever pertinent school practices have been evolved to nurture student governance, aesthetic development or whatever seems an obvious truism. The only time we forgot to honor it was in the breach. The best and brightest of teachers can help greatly in these constructions if included; they can also run the ship aground.

Thus, I think the educator going my way should expect to devote an inordinate amount and quality of time to consultation-education with teachers; to "teaching" democracy by sitting in "town-meetings" or planning for them with the student agenda committee, and to advocacy, especially if that means *doing* with teachers and adolescents what one espouses. I would even add broken ribs in a "touch" football game at 1 A.M. on a school retreat as part of the hidden costs of "inquiry" into "the designing of new programs of action that will be sufficiently complex to allow us and our students to live and grow together in democratic community" (Reimer & Power, 1980, p. 320). A serious commitment to teachers' development as the means to furthering their students' growth should be the all encompassing research effort of at least one investigative group amongst us.

Further, adolescents will be adolescents. Both developmental psychology, as reviewed earlier, and close encounters with them in touch football have driven this home. Their personal, moral, social world isn't ours, but the joint in the schoolyard, the nonchalance about a "crucial" town meeting come inseparably with their turf. They will, in short, partly understand and partly corrupt both the dreams and the program or school structures (e.g., "a school in which justice is a living matter") we try to create with them. In addition to our advocacy, personal representation and inquiry in building toward such new adolescent societies, they need our love when they fall short.

What I also have learned is the wisdom of meeting adolescents in their zone of next development in whatever competencies we jointly seek.

Stage 5 is beyond all but a handful. Stage 4 is difficult enough for them to try to understand, let alone be. Decalage where they are has much to be said for it. Of course, to complicate things further, adolescents will be in several stages of development at once. But personal growth happens in small, progressive steps, as I have seen it. Adolescent development does not take quantum leaps, even when we try very hard to make it do so. Piagetians can relax about the American's obsession with accelerating development. They may try but they can't. What is feasible by education is to help adolescents actualize their next stage of personal competence, to avoid getting stuck. That is what we need to get firmly fixed in their minds and ours.

We also need a realistic sense of school size and time for a successful developmental program. I suspect systematic efforts involving units or "houses" of 250 students and 8-10 teachers may be optimum in human scale. Further, the period of intervention in altered organizational-social arrangements needs to be much longer than the one-semester typical in subject matter or curriculum interventions. The Russians consistently advance 7 year plans and fail. My view is that one would want to do applied study of institutional/school arrangements to promote political, cognitive, moral, aesthetic, emotional development or what have you over a period of at least 5 years.

That brings me to the complex matter of research on "systematic" developmental education. My priority, as already noted, would be to get the central ideas and practices (for example, the psychology of emotional development and education to promote it) straight first. For that reason, I opposed moral development research at S.W.S. as premature. I didn't know where, or if, it fit as a dependent variable. Hard thinking about the adolescent competencies to be promoted and careful educational development, coupled in due course with formative evaluation, merits all the initial energy. Time for summative, longitudinal research when there is a logically and educationally coherent program in place. I also believe the research to date argues that it is imperative to employ multiple developmental (and other) measures in evaluating the effects of such programs.

One very personal point may be permitted about the critical need to widen the lens through which we look for and measure development as a result of systemic education. Perhaps you can imagine the chagrin I felt when, after four years of intensive involvement with S.W.S., I learned that someone else's numbers said the students' moral reasoning regressed during our intervention there. It helped (a little) to believe that, somehow, pre and post scores had been confused, or that the students simply hadn't taken the post-testing seriously, or that moral development never had been our *raison d'etre*, that Travers' data (1980), DiStefano's data (1980) and the evidence that group moral norms had developed around community and self-governance were counter-indications and so on. Gallows humor aside, the finding of no growth on a central adolescent competence is still painful to admit.

Putting all the developmental bets on one adolescent competence or a single measure can result in some very black hours for the educator. And searching analyses of whether he's totally off track.

Conclusion

This paper has argued that education can contribute significantly to adolescents' development--in particular their ability to think abstractly, their moral reasoning, their understanding of themselves, their social maturity. Other competencies have also been taught, for example, citizenship, communication, child care skills and so on. Enhancing individual maturity can be done through the subject matter curriculum of the high school when certain kinds of teaching prevail; through special courses in counseling, womens' studies which have development as a first aim; through the students' participation in the governance and adjudication of their classrooms or school; by staff education which aims to promote the teachers' own personal and professional development; by the education of parents and families. From a beginning with curricula and teaching to enhance student growth, the applied research is now moving to how classrooms and the high school as a whole may be altered in the direction of contributing more to adolescent development.

And the evidence is that adolescents do develop as a result of these varied curricular and school experiences. Growth occurs slowly and progressively in about half the students who participate. Certainly there are weaknesses in the interventions and the research which qualify some of the development which is found (and suggest why development does not occur). Despite these acknowledged weaknesses, the consistent pattern in the findings is one of hard-won adolescent development. The conclusion is that modest enhancement of a wide array of adolescent competencies is realizable by changes in the curriculum, teaching and school organization which are within the practical reach of many American high schools. If there is the will, there are the ways. And we have only begun to plumb the potential of curricula, teaching, teachers and school organization to contribute to the all around growth of our adolescents.

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REACTION: CONTEXT AND BROADER CONCEPTIONS OF DEVELOPMENT

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I approach the task of reacting to Mosher's paper as a researcher and educator concerned with the plight of minority youngsters in America. My concern is heightened when I consider the appalling statistics on youngsters out of school and youngsters excluded from school (Children's Defense Fund, 1975). The majority of these youngsters are from minority ethnic groups. It is difficult to speak of development as an aim of education when a cursory examination reveals that most of the reasons these youngsters are excluded from schools are minor in importance. We can only ask what the aims of schooling are when youngsters who are socially and culturally different are not served at all by many schools. Development seems hardly to be the issue. Despite what we might wish, the context of American social and political life seems a greater determinant of what is learned and who learns. The need to attend to this dimension of education is paramount.

Ralph Mosher admits to problems in developmental theory and its application in dealing with the plight of the poor and minorities. Early on, Mosher qualifies his claims for success by noting that the various curricula devised to promote development in adolescents seem to work best with mainstream youngsters. He gives no explanation of why this should be so. Yet, he suggests that black youngsters who seem to fit the mainstream profile *do* profit from his programs. On most of the current developmental scales, females, non-white, and poor youngsters seem to score less than their white male counterparts. One might expect that youngsters who score lowest on these scales ought to be the ones who would profit most from these programs. Why these programs seem targeted to only one segment of the population raises questions regarding the theory, its application, and the youngsters. Is the problem the theory, the application, or the youngsters? I think it can be reasonably argued that there are problems with the theory and the application with respect to the particular youngsters. First, let us consider the theoretical issues.

Problems in Theories of Development

If Carol Gilligan's work in this volume on women their moral development has any relevance for educators and theorists, then we must ask similar questions regarding minority youngsters who also fail to score high on Kohlberg's Moral Development Scale. In the early seventies, I raised similar questions regarding Erikson's model of adolescent development for minorities and women (Moseby, 1971). While Gilligan questions the consistent sex bias in developmental theories, I raised questions of ethnocentrism. Today, I would add questions of class bias as well. Developmental theories based on mainstream middle class notions of life reveal a basic problem in formulating theories of adolescence.

Theorists working on adolescent development have attempted to emulate their colleagues in child development in seeking to find universal, invariant sequences or stages of development. In doing so, they have made their local adolescent phenomena a normative standard. This may work for tracing stages of early child development, but it does not work when attempting to trace universal stages of adolescent development. The difficulty with any adolescent developmental theory is the impossibility of ignoring context and culture. The stages of early child and infant development are relatively independent of social influence for at least two reasons. First, development at this time is closely tied to biological development and is thus species specific. Second, early language development precludes the substantial impact of culture and society. By contrast, adolescence is a preeminently social time and the youngster's developing powers of locomotion in space and in thought cause constant collisions with the elements of social reality. Thus, adolescent development must be examined in its cultural context. Puberty and increased powers of cognition may prove to be the only universal marker of this period of life. One is tempted to add increased economic independence, but this is rarely the case for many American mainstream adolescents.

The key distinction which seems to give rise to charges of bias--whether of sex, race, or class--is the interpretation of the differences as deficits (see Baratz & Baratz, 1970). Mosher claims that no differences in scoring appear on the developmental scales when social experiences and formal education are the same. However, this is the heart of the matter--growing up poor, black, or female means a difference in social experience and formal education. The question is whether these discrepant scores represent deficits on a unidimensional scale, or whether these discrepancies reflect qualitatively different experiences of development. Gilligan's data suggest that there are possible additional dimensions of development that merit more study. While no one questions the value of increasing complexity of thought and improving interpersonal skills and their attendant cognitive and ego functions, the notion that apparent discrepancies are due to arrested development seems too simplistic.

Let me give an example. In their classic study, Lesser and Stodolsky (1967) looked at intelligence--not in the usual unidimensional sense like I.Q., but rather as a set of intellectual skills. They found ethnic and social class differences in the patterning of the distribution of scores on these skills. While Jewish youngsters were high on verbal, they were lower on spatial skills. Chinese youngsters were lower on verbal yet higher on spatial skills. If only one scale had been employed, the full range of abilities would have been lost and one group or the other would have been labeled as deficient. No doubt instruction would have made up this deficit. The problem, however, is that the range of skills and abilities being considered would have been limited and would have missed important differences. Developmentalists appear to be making a similar error. Since most of the developmental scales and notions have been defined on the basis of studies of a segment of the population, to impose curricular measures and programs based on these studies is to make some males and their social and educative experiences the norm. The optimal curriculum should be addressing all dimensions of development and providing opportunities for maximal growth for all youngsters.

Because of the many variations on adult social and occupational roles and the variation in the order of presentation of these demands upon the adolescent, we must be wary of suggesting a universal and invariant sequence of development during this period. Indeed, we must begin to incorporate these variations within our knowledge and not make the reductionist error of overlooking the content for the structure. Both are important, and we must seek to explore the implication of each on individual development. This is by no means an easy task.

Take the example of Erikson (1968) who proposes a stage of development concerned with identity formation followed by a stage concerned with intimacy vs. social isolation. While Erickson's stage development is patently contradicted by H. S. Sullivan's (1953) notions, some theorists, including Kenniston (1963), have argued that the prevailing tendency of young adults in the 1960s to postpone marital commitments suggested that a new stage should be added called youth. In other words, a change in the social context suggested that a change should be made in the sequence and content of developmental stages posed by Erikson. Similarly, the search for developmental patterns that fit Erikson's stage theory is generally a failure in non-Western societies which posit a different social schedule of events. Discrete rites of passage and different marital schemes seem to deny the relevance of Erikson's stage theory to the non-Western world.

To go to the extreme of cataloging developmental tasks and equating them with developmental stages is not what is being argued here. A list of age-typical developmental tasks such as sexual intimacy and marriage, vocational identity and achievement, parenthood, acceptance of life's completion and conclusion are matters of content, not form, as Kohlberg (1970) has pointed out. These need not be irreversible nor invariant in

sequence and unfortunately are all too easily presented as norms of development. Yet, the content of experiences must affect the forms of development and be considered.

If Gilligan's subjects take the themes of responsibility and caring and elaborate them in sophisticated ways, this must be viewed as commensurate with Kohlberg's subjects who take the theme of rights and justice and elaborate upon them in similarly sophisticated ways. If developmentalists consider the formal characteristics of both types of statements, they will find similar stages with differing content. In fact, they will find individuals elaborating both themes and possibly others as Gilligan shows in Martin Luther King's pronouncements.

Some will say that opening consideration to the content, form, and context of adolescent and adult development will open the flood gates to cultural relativity and reduce science to the study of individual cases. This seems an unjustified fear. Rejection of clear exceptions to the rule leads to no science at all. Examining these exceptions is not opening the door to relativism.

However, if the assignment of stages is content dependent, as it appears at present to be, then the result will be that whole groups of individuals whose experiences force them to focus on another set of themes will be deemed deficient. For poor minority youngsters, the themes are different by virtue of not only cultural differences, but also the fact that their relative place in society poses a different set of questions to be answered. For one, minority children face the existential dilemma of trying to find an identity in a society which is fundamentally hostile to their very existence and advancement. While we know little about the specifics of development under these circumstances, it seems obvious that minority youngsters who come to value themselves must radically critique the identities society offers them in much the same way females must question traditional role assignments for them. Not all do, but if the roles ultimately adopted involve any notions of self-determination, then such youngsters must consider some range of alternatives mainstream adolescents rarely encounter. Without forcing a choice, school must encourage conscious examination of one's place in society. The power of Lois Erikson's (1979) work is, in large part, a function of its attempt to help women understand what being a woman means in a context. The notion of examination and explorations of atypical options needs to be incorporated into developmental theory.

In summary, present day theories simply ignore the variations of development present in our own culture, failing to expand upon the problems of different ethics and different notions of adulthood. In regards to application, there are additional problems.

Problems in Application

For many poor, minority youngsters the problems encountered in school stem more from cultural and class conflicts than from impoverishment of their environments. As Labov (1972) has pointed out, language development is hardly stifled in any environment. We can assume the difficulties many poor and minority youngsters experience in reading and other academic tasks are a function of cultural and class conflicts rather than deficient intellectual ability or impoverished experience at home. It is accurate to say that formal educative experiences for these youngsters will be less than desirable, since the schools fail to motivate and teach these youngsters. It may be appealing to suggest that the differences and deficiencies shown in developmental scales are due to lack of academic skills and learning. However, Gilligan's work, with a relatively well educated sample, still reveals that other themes are not tapped in existing theory. Developmentalists' lack of consistent results with minorities and poor youngsters is more likely a result of schooling's general failure to engage these youngsters so that interventions aimed at development may have some impact. This suggests a need for pervasive restructuring of schooling, and this seems to have been done in Mosher's "just school" concept.

Most of the programs proposed by Mosher and others are either additions to present curriculum in the form of courses, or additions that encompass without significant change the existing curriculum in the schools. Even the "just school" program finds most of the students most of the day going on with schooling as usual. Just as Kohlberg (1972) found that prisoner moral development could not take place within the traditional life of prison, so Mosher has recognized in the "just school" notion that moral development cannot take place in isolation within a school whose other programs undermine and contradict the very notions he is trying to nurture. Even more attention to context must be given besides examining the governance structures, although this is no mean achievement in itself.

What is needed is a pedagogy of development which will encompass not just special programs but the school as a whole. In fact, this may be necessary for political reasons since it is difficult to imagine either the public or teachers embracing the notion of the "just school" with its implication that things are less than just at present. Indeed, we know little of what the implications of Piaget's theories are for the teaching of grammar or fractions. Clearly, inquiry modes seem related, but how do we order and structure the curriculum as well as teach it?

There are definite implications for teacher training, especially when one notes that for most prospective teachers, Piaget is covered in educational psychology with little discussion of Piaget in methods courses. Every teacher has seen the large number of books purporting to explain Piaget to teachers, but few will find directions for day-to-day teaching. Unless developmental notions impact more on the entire curriculum, not just special courses or school governance, it is not reasonable to expect a single course or special program to have much effect.

Perhaps an easy way of killing two birds would be to have better descriptions of what Mosher's teachers actually do that differentiates them from others. The study of teaching has moved from propositional dicta to empirically verified practice employing more and more actual classroom observations. Mosher mentions that his teachers, in many cases, simply do what good teachers have been doing for years. The question is, what do good teachers do? Presently, we have few answers to that question. It would help to both define a pedagogy of development as well as validate Mosher's programs if we had clearer data as to what his teachers are actually doing with youngsters.

While we are suggesting an expansion of developmental theory to include the context of adolescence and suggesting that school programs deal with the context provided by the total school curriculum, it seems obvious that we need to look at the school also in its larger context. In particular, the family influences seem to have an important bearing on the fate of most children. We need to examine the family's values, child rearing notions, and perspectives on schooling. This seems particularly relevant to the education of minority youngsters. Tensions between the school and family need to be lessened and the strengths of both reassessed.

In summary, the journey charted by Mosher is just a beginning. It has been an exceptionally good beginning. The challenge is to continue to expand our notions of development and our treatment of the various contexts of application. Developmental theory need not exclude major segments of the world's youth population. It can and must look at the variations on development across race, social class, and sex. Developmental theory can and should suggest ways to promote the content and structure of development in the schools. To do this, a pedagogy of development--one that is not blind to the range of variation in human development--is a necessity.

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SECONDARY SCHOOLS, SOCIALIZATION, AND SOCIAL DEVELOPMENT DURING ADOLESCENCE[1]

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The purpose of this paper is to suggest an agenda for the study of the effects of secondary schools on social development during adolescence. The paper begins with a discussion of some suggested policy initiatives from the early 1970's (Brown et al., 1973; Coleman et al., 1974; Martin, 1974). Next, an heuristic model for adolescent development is presented. The model is a framework for ordering and understanding the phenomena of adolescent social development. The discussion of the policy reports and the literature, reviewed in light of the model, leads to the research agenda proposed in the final section of the paper.

Suggested Policy Initiatives of the Early 1970's

Assumptions Underlying Policy Initiatives

As the first *sputnik* and concern about the Silent Generation resulted in a reassessment of secondary schools in the late 1950's and early 1960's

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so did the turmoil in the nation's colleges and universities a decade later. Three commission reports were issued (Brown et al., 1973; Coleman et al., 1974; Martin, 1974), each of which contained similar kinds of general recommendations and specific proposals for reform. Several interrelated assumptions that bear upon social development underlie the suggested policy initiatives. These assumptions focus upon some presumed consequences of the onset of nearly universal secondary education. It is argued that universal secondary education is accompanied by an increased segregation of adolescents from adults. The implication is drawn that the peer group has gained in its power to socialize at the expense of the family and sometimes to the detriment of the effectiveness of secondary schools. Peer effects on behavior and development are assumed to be negative with respect to mainstream social values. Age segregation and increases in size and consequent bureaucratization of the secondary school are viewed as increasing alienation from the mainstream cultural tradition (e.g., a presumed decline in the work ethic), increasing intragenerational hostility (e.g., the generation gap), and decreasing the capacity of young people to assume adult roles (e.g., inhibiting the development of autonomy). With the exception of the departure point--the advent of mass scholarization--every one of these premises has been called into question (e.g., Dreeban, 1974; Heyneman, 1976; Hill & Monks, 1977; and Timpane et al., 1975).

Segregation and peer influence. While the industrial revolution has been accompanied by a decrease in the spheres in which families can effectively socialize their young--namely in many of those concepts and skills directly required in much productive work outside the home--there is little evidence that the family has lost its socializing power in a variety of important realms or that significant decreases in that power have occurred since, say, 1960. Parents remain the most important influence upon occupational and educational aspirations (Kandel & Lesser, 1972). Although the plans of best friends are important, other peers have limited independent influence on future aspirations (Spenner & Featherman, in press). Peer influence is likely to be greater in matters of consumption and taste (Brittain, 1968). (And, with the aid of mass-marketing strategies, youth fads often become the fashions to which adults aspire.)

The ghettoization of American communities (and, therefore, to a considerable extent, schools) at every social class level is common in urban areas. Where schools are more mixed, the bases for friendship, clique, and crowd formation are likely to ensure that young people interact outside the classroom mainly with young people who have been socialized similarly, who have similar sociodemographic characteristics and who engage in similar activities (Hartup, 1970; Kandel, 1978). Within the classroom, if the students are from comfortable working-class and middle-class backgrounds, the values and the norms they encounter in teachers and principals are, by and large, likely to be

congruent with those of their parents. Local control of school policies may further encourage such similarities. Therefore, isolation from parent values does not necessarily follow from the fact that young people are in schools for several hours each day for an increasingly longer period. Social science data from well before and after the late 1960's support the conclusion that:

> In critical areas, interactions with peers support, express and specify for the peer context the values of parents and other adults; and the adolescent subculture is coordinated with, and in fact is a particular expression of, the culture of the larger society (Kandel & Lesser, 1972, p. 168).

Alienation. There is no existing evidence for a secular trend of alienation from society among the adolescent population. Even during the time the suggested policy initiatives were being advanced, there was no evidence for a decline in the work ethic, for example (Yankelovich, 1969). Similarly, there was and is no evidence for an increasing intrafamilial "generation" gap. The youth activist leaders of the late 1960's more often acted in concordance with their parent's values than in opposition to them (Flacks, 1971). Adolescents and their parents in survey studies all over the world continued to report that the period is a relatively pacific one (Hill & Steinberg, in press; Kandel & Lesser, 1972; Rodriguez, 1975). The "action" was between Blacks and Whites, among social classes, and between conservatives and liberals. The *adults* of opposing factions saw others' young as heading for perdition and attributed division in society as a whole to the rebelliousness of the young (Kandel & Lesser, 1972).

The transition to adulthood. Decreases in the capacity to assume adult roles are highlighted in both the Martin and the Coleman formulations and these are attributed to the ineffectiveness of secondary schools. In relation to social development, schools are said to encourage passivity which in turn inhibits job performance. Sad to say, there seem to be no social science data bearing on this issue. It cannot be concluded that secondary schools are any more rigid than they ever were, or more authoritarian than families, or more stultifying than many workplaces. Attributing ineffectiveness in the teaching of autonomy to the schools probably both idealizes the degree of autonomy characteristic of most adult work roles and underplays the value placed upon external conformity to authority by a substantial proportion of the parent population (Kandel & Lesser, 1972; Kohn, 1977).

The most thorough of the critiques of the policy reports concludes that:

> On the whole the reports' recommendations flow more discernibly from qualitative judgments about the state of the world than from the social science evidence addressed (Timpane et al., 1975, p. 18).

The argument is not so much that assumptions about the transition to adulthood misrepresent the data as it is that the data do not exist. Given the persistence with which the same themes were chosen by thoughtful social critics from the 1950's through the 1970's, there is good reason to consider these themes as sources of inspiration for research. Indeed, in respect to social development, the reports may be better read for their research suggestions than as research-informed policy alternatives.

Suggested Policy Initiatives

Timpane et al. (1975) usefully categorize the policy suggestions from the reports into four groups: dispersion of educational efforts from the secondary school into the community and the marketplace; individualization and diversification of instruction; curricular change; and greater participation of students and families in secondary school governance. These proposals stem from the concern that secondary schools may not provide exposure to the world of work sufficient to ensure a reasonable basis for vocational decision-making. At the most general level, the concern is that schools do not educate for choice-making in much of *any* realm in a pluralistic society because they do not permit "real" choice-making and the consequences that follow: "At the core of the modern effort to reassess adolescence is...the extent to which we permit entry into the institutions of society for young people for purposes of their socialization" (Hill & Monks, 1977, p. 2). Education for decision-making in a diverse society would appear to require exposure to diversity *and* the kind of environment that permits honest choice without disastrous consequences, but with consequences nonetheless.

The theoretical bases for these kinds of assertions in relation to adolescent development are clear. There is Piaget's argument that it is the transition to adult roles that instigates the transition into a new stage of thought, formal operations, characterized among other things by the capacity to take a variety of perspectives into account in solving a problem and to do so systematically, treating what is given as one of a number of possible instances and reasoning on the basis of absent instances as well. But Piaget is not very specific about which aspects of the adult roles moderate the transition--responsibility and commitment, complexity, or diversity of environmental demands (Inhelder & Piaget, 1958). Coser (1975) has argued that it is diversity of expectations directed toward a given role occupant that creates the capacity for autonomous thinking and decision-making. From her point of view, one comes to consider oneself to be autonomous and develops the capacity to think

autonomously--relatively free of a given stimulus context--only if placed in the situation of having to make decisions and having to act upon them in relation to *varied* expectations impinging upon the *same* situation.

There is little empirical information available about the development of mature decision-making during adolescence, one element of which must be the capacity to take multiple perspectives on a given issue simultaneously. However, it seems that principled moral reasoning (which presupposes the ability to reason on the basis of multiple possibilities) does *not* emerge until after college entry or entry into the labor force (Kohlberg, 1973). It is necessary for both basic research and policy research to study the effects of experiencing a diversity of role expectations and taking responsibility for self, things, and others on the development of formal thinking with the social domain. Programs designed to implement the suggested policy initiative may provide a useful arena for such research *provided* that they actually expose young people to work and other community roles that are characterized by responsibility, diversity of expectations, and the like.

Conclusions

Given hindsight and the absence of evidence for the assumptions underlying recent policy initiatives, it is fair to assert that historical fluctuations were mistaken for secular trends and that the experience of minorities in one age cohort was vastly overgeneralized in recent policy reports (Hill & Monks, 1977). As Timpane et al. (1975) point out, there is a pervasive theme in the reports of the danger disaffected youth pose to society, a sense of danger that five to ten years later is no longer so apparent. On the other hand, the absence of social science evidence for many of the claims made does not render them matters of lesser concern. The critiques of an earlier period generated by the dangers of a Silent Generation focus largely on the same issues, namely universal secondary education and the subsequent size, bureaucratization, and patterns of authority in secondary schools. Friedenberg (1967) was perhaps the most lively and trenchant of these critics:

> The young must not be compelled to submit to year after year of education that denatures them. The schools must not be compelled to accommodate the hordes of youngsters unqualified by earlier experience to participate in its specialized education functions, and permit them to disrupt those functions for which they are unqualified and in which they see no value. The young must not be worn into submission during their most vulnerable and crucial years of growth, to the ignoble view of life that dominates the schools. They must not be constrained to relinquish the precise and significant image of

> themselves that can only be developed when personal experience is privately explored under conditions of trust and intimacy (pp. 248-249).
>
> Every high school student can therefore be virtually certain that he will experience successive defeat at the hands of teachers with minds of really crushing banality. The paradigm, perhaps, is Charlie Brown impotent before the invincible ignorance of Lucy (p. 181).

In addition to the authority-autonomy theme, there is in Friedenberg's work a more sensitive recognition of the diversity of the adolescent population than is manifest in the reports at hand. The point is not only that we have universal secondary education but that this has required the schools to deal with many students not well-matched, either motivationally or cognitively, to schools' traditional priorities and ways of doing things.

The reports deny the pluralism of our society in other ways as well. They present a single, male version of adulthood and work. And this version is highly romanticized: it assumes degrees of autonomy and choice-making in jobs that probably do not exist for very many in the population. It also assumes that authoritarian classrooms are not good for the transition to adulthood. But if adulthood on the whole means work (as the reports imply) then authoritarian school practices may not be a bad match to the conditions of employment for the majority of Americans.

The reports also fail to consider preparation for adult roles in the family for both males and females. Perhaps this is because of the assumption that the action in socialization has switched from parents to peers, an invalid assumption as it turns out. (Here the evidence *does* exist.)

Finally, in these reports the experiences of college-age activists were generalized downward to secondary school students and their "rebelliousness" assumed. Policy attention was and continues to be given to older adolescents, thus ignoring the fact that many of the live issues of social development for adolescents begin earlier--at the time of puberty, at the time of transition to secondary school, at the time of changes in cognitive performance and probably in ability. In view of these conclusions about recent policy initiatives, in the next section I will present a heuristic model for adolescent development that provides a more expanded, yet complementary, context for generating a research agenda.

A Heuristic Model of Adolescent Development

Six issues have captured the attention of developmental theorists and researchers in relation to psychosocial development during

adolescence. These issues--attachment, autonomy, sexuality, intimacy, achievement, and identity--do not encompass the total domain of adolescent behavior. Instead, the labels refer to clusters of variables in which major developmental changes, *transformations in social behavior*, have been hypothesized to occur during the second decade of life. Singly or in combination, the six issues labelled and defined in Table 1 have been presented as critical or core "tasks" or "problems" of adolescent development. Certain resolutions of the tasks have been proposed to be healthy and normal.

The origin of most theories of adolescent social development lies in clinical practice and clinal research, mainly with upper-middle-class neurotic males and lower-class-delinquent males. A good case can be made that the occurrence, the form, and the actual resolution of the tasks vary considerably by gender, by social class, and by culture. The six issues are included in the model not because they are demonstrated realities of adolescent social development but because they represent the areas where the theoretically-guided research action has been, is now, and is likely to continue to be.

Hypothesized Changes in Psychosocial Behavior During Adolescence

Attachment and autonomy. Although the process is ill-understood, few would quarrel with the proposition that the second decade of life brings with it some modification of the passionate attachments of children to their parents. Indeed from one theoretical perspective (A. Freud, 1958), the vicissitudes of these attachments at the beginning of the puberal cycle of growth and the awkardness of the immature ego's attempts to control them constitute the impetus for personality development during adolescence. A certain degree of storm and stress and rebelliousness are supposed normal corollaries of modifications in attachment. Psychoanalytic theory and its softer derivatives continue to play a central role in practitioners' conceptions of the adolescent period. In particular there is a widespread belief in the corollaries. Nevertheless, no attempts have been made to study transformations in attachment during adolescence (despite the popularity of the problem for students in infancy). It does seem likely that modifications in attachment vary as a function of the strength of attachment during infancy and childhood (Mead, 1928), and on the other end of adolescence, as a function of what the given adult society views as appropriate behavior between grown children and their adult parents (Hill & Steinberg, in press). It is useful to distinguish this relative and resultant emotional autonomy from behavioral autonomy--by which I mean something like self-initiated activity and confidence in it. We do not know how these two are interrelated empirically but it seems possible from existing evidence that behavioral autonomy, sponsored and supported by peers, may provide the security that makes a transformation in emotional attachment to parents possible (Douvan & Adelson, 1966).

Table 1

Psychosocial Issues in

Adolescent Development

Issue	Hypothesized Adolescent Changes
Attachment	Transforming childhood social bonds to parents to bonds acceptable between parents and their adult children.
Autonomy	Extending self-initiated activity and confidence in it to wider behavioral realms.
Sexuality	Transforming gender roles to incorporate sexual activity with others.
Intimacy	Transforming acquaintanceships into friendships; deepening and broadening capacities for self-disclosure, affective perspective-taking, altruism.
Achievement	Focusing industry and ambition into channels that are more realistic than before and have permanent consequences.
Identity	Transforming images of self to accommodate primary and secondary change and coordinating images to attain a self-theory that incorporates uniqueness and continuity through time.

Sexuality and intimacy. Although we have little information about the course that initiation into sexual activity takes, it is evident that for a majority of young persons, gender roles are transformed during adolescence to incorporate sexual activity with others. The relation of this transformation in gender roles to the development of the capacity for deep emotional relationships with others--often called *intimacy*--has been the object of much speculation and little study (e.g., Erikson, 1963; Sullivan, 1953). On the basis of current evidence, based largely upon samples subject to traditional sex-role socialization, it seems likely that girls bring a capacity for intimacy to heterosexual relationship in late adolescence that boys do not (Douvan & Adelson, 1966). It has been argued that the reciprocal contribution brought by boys to serious courtship is greater experience, albeit private, with body-centered sexuality (Reiss, 1967). In any case, the developmental course of sexuality and intimacy during adolescence is not well understood.

Achievement. During the second decade of life, for males anyway, achievement ambitions seem to become more realistic (Douvan & Adelson, 1966). That is, they better reflect not only increased knowledge of one's own attributes but an increasingly greater understanding of occupational systems, and the match between the two, as well (Borow, 1966). Additionally, for both sexes, choices made come to have increasingly constraining consequences. For example, given current institutional practices, the girl who opts out of the math and science sequence in high school may close doors that never again reopen (Conger, 1977).

Identity. Of all "grand theories" of the adolescent era, in recent years, Erikson's (1968) notions about identity probably have received the most attention from clinicians and practitioners. And this attention persists despite the absence of good evidence that the theory is useful as a means of understanding anyone other than upper-middle-class neurotic males. In relation to the model, I would characterize the identity problem as two-fold. First there is the business of transforming images of self to accommodate bodily changes and changes in social expectations, and second, there is the problem of coordinating these images to attain a self-theory that incorporates uniqueness and continuity through time.

None of the six psychosocial issues that have been identified are issues only during adolescence. Each of them has a history and a future in the life cycle. What is of interest for the understanding of adolescence is not identity but changes in identity, not autonomy but changes in autonomy, not intimacy but changes in intimacy. And we lack empirical, especially longitudinal, studies of those changes. Thus we do not know how often the theorized, idealized, or other resolutions of these issues occur during adolescence, and in what nooks and crannies of the population. One is tempted to speculate

that they hold in some instances only for boys (as in the formulations of intimacy), and only some of the time for upper-middle-class adolescents (although they are the patient-subjects upon whom most of the formulations are based), and rarely for nonmiddle-class young people. Not only do we lack an understanding of the developmental course of the clusters of variables that define each issue, we also lack a clear understanding of the determinants of those changes.

The Primary Changes of Adolescence

Despite the attention that the changes described in Table 1 have received, I argue that they are secondary to some more fundamental changes whose course and effects we need to study if we are to understand adolescent social development. These changes are threefold: biological, psychological, and social.

Biological change. The biological changes take place with the onset of the puberal cycle of growth, and include the growth spurt and the advent of reproductive capacity. These changes are virtually universal despite normal, multi-year variations in their onset, duration, and termination (Tanner, 1962). Theoretically, it is pubertal change that plays the major instigatory role in the change in autonomy-striving according to the Freuds (A. Freud, 1958); it is pubertal change that plays a major instigatory role in precipitating the identity crisis according to Erikson (1968). Childhood images of self are no longer adaptive in the face of the reconstitution of the organism. Empirically, Steinberg (1977) has shown that changes in patterns of parent-child relations are associated with entry into the puberal cycle. The biological changes are said to be primary, then, because they seem to occur earlier in time than changes in identity, autonomy, and the like, and also because the form they take is more universal than is the form of changes in, say, sexuality or achievement.

Cognitive change. Owing to our relative ignorance, I am less safe in asserting that a qualitative change in reasoning ability should be given a similar primary status. But I will do so because I think the possibility should be seriously entertained. Supporting evidence confirms the general contours of Piaget's argument that during the second decade of life, a major change in reasoning occurs--a change which makes it possible to reason on the basis of possibilities rather than being restricted to what is concretely given (Inhelder & Piaget, 1958). Among other things, this means a new capability to reason on the basis of ideals and principles (both forms of unobservable possibility) which is denied the younger child. At present our tasks for assessing *formal operations*--Piaget's name for this new kind of reasoning--do not permit us to draw very satisfying conclusions about its universality (Neimark,

1975). But even if formal operations turn out to be only a developmental possibility for everyone during the second decade rather than a developmental reality in all social contexts, they are a primary influence in relation to the psychosocial issues discussed previously. It seems that the identity formation process described by Erikson is impossible without formal operations in the social realm (Erikson, 1968; Hill & Palmquist, 1977). The capability for mature intimacy as described by Sullivan (1953) and Erikson (1963) would likewise seem to require formal operations. And so would the endpoints of stage models for mature vocational choice (Borow, 1976), moral autonomy (Kohlberg, 1973), and value autonomy (Douvan & Adelson, 1966).

Change in social definition. The third change that I call primary is that kind of change which occurs when a given society is in agreement in assigning a definite status to those who are in or near the second decade of life. What is crucial here is that there be universal agreement in the society about expectations for the behavior of the persons in the age group: what their responsibilities are, what their privileges are, what their rights are. Social critics point out that, where adolescence is problematical in our society, it may be because we lack such consensus. Where it does occur, it is a potent force in settling identity, defining autonomy, specifying sexuality, and the like (Eisenstadt, 1956).

Adolescent Social Participation

These primary changes do not exert their effects on autonomy, attachment, intimacy, achievement, or sexual behavior in a sociocultural vacuum. Puberty, cognitive change, and a new status associated with age affect psychosocial development through the responses of significant others in the social systems of which the adolescent is a part--that is, through social participations in school, family, peer, and for some, work contexts. How family members, peers, school personnel, and work associates interpret and respond to the primary changes and exemplify adult behavior determines, in large part, the pace and form of the secondary changes--those transformations in psychosocial development which have been discussed above. How sexual maturation (primary change) affects the development of sexual behavior (secondary change), for example, depends upon how significant others interpret and react to the observable signs that sexual maturation is taking place. [The term *significant other* was coined by Harry Stack Sullivan (1940) and refers to the notion that in pluralistic societies different people influence different aspects of the conception of self and other objects of cognition. Social influence is segmented: An individual's models and role-definers are not necessarily reflective of some *generalized other* (Mead, 1934).] The form, content, and timing of the psychosocial changes may be expected to differ as a function of subsocietal (stratificational, ethnic,

regional) values and norms as these influence the reactions of significant others to the primary changes.

In sum, intraindividual change and universal change in social definition are posited to play a major role in accounting for transformations in social development from childhood to, and through, adolescence. But their influence is moderated by the responses of significant others and these responses, in turn, are shaped by the embeddedness of the adolescent and the significant others in family, school, peer, and work contexts. What do we know about effects of social participation in each of these contexts? Obviously there is neither space nor place here either to detail all of those aspects of family, school, peer, and work contexts that impinge on adolescent social development or the variations in them. Accordingly, the discussion to follow is highly selective and many of the items in it were chosen owing to their implications for policy discussions.

Family. Parent-child relations in the family during adolescence have been studied--largely in relation to the development of autonomy (e.g., Strodtbeck, 1958; Kandel & Lesser, 1969; Elder, 1968)--but the time-series data needed to describe transformations in parent-child relations *during* the adolescent period simply do not exist. Retrospective reports of parents suggest greater intrafamilial conflict at 12 and 13 as opposed to later in adolescence (Offer, 1969). Steinberg (1977), demonstrated changes in parent-child relations as a function of entry into the puberal cycle. Beyond these two efforts, however, we have little data bearing upon the interrelations between the primary changes, changes in parent-child interaction, and their consequences for psychosocial development.

Although the data are not longitudinal, there are some findings related to autonomy in adolescence that will be highlighted here. The first has to do with the issue of social class and autonomy. In an interrelated series of studies Kohn (1977) has demonstrated that:

> Each of the three conditions that make for occupational self-direction--the absence of close supervision; doing complex work with data or with people, and not working with things; and working at complexly organized tasks--is significantly related to fathers' valuation of self-direction for their children (p. 161).

Middle-class parents have a higher valuation of self-direction and working-class parents of conformity to external authority. Middle-class parents, given these values, are more likely to base discipline upon their interpretation of children's intent and working-class parents are more likely to punish on the basis of the direct and immediate consequences of children's actions. This difference is important in relation

to parental and student evaluations of--and perhaps even the effectiveness of--disciplinary practices and programs designed to foster self-direction in secondary schools. [It might be noted that "lack of discipline" is highest on the list of problems of schools as perceived by the public (Gallup, 1975).]

A second, related point about the development of autonomy can be made. In a recent review of the literature on the relation between parenting practices and autonomy, Hill and Steinberg (in press) concluded that authoritarian parenting practices are consistently related to low autonomy in study after study *regardless of how autonomy is conceptualized or measured.* Thus whether investigators study subjective feelings of autonomy (Kandel & Lesser, 1969), "chameleonism" in response to peer, teacher, or adult pressure (Devereux, 1970), or operationalize their variables in other ways, authoritarian practices are negatively correlated with autonomy. Unfortunately, the study remains to be done that examines Kohn's arguments and variables and the kinds of behavioral outcomes in adolescents referred to here within the same design.

A third, related point is that extreme parenting styles during adolescence--excessive strictness *or* permissiveness--are associated with poor intrafamilial relations and slavish peer conformity. Storm and stress in the family is more often a function of extreme parenting styles than a solely intrapsychic matter. As Lipsitz (1977) has concluded: "It is the family . . . that in such cases often pushes the adolescent out; the peer group alone cannot pull him or her out" (p. 164).

Peers. As has been noted, the initiators of recent policy suggestions assume an increasing negative role for peers in the socialization process. The perspective that peers play a constructive and even indispensable role in socialization has little currency. This is the case despite the fact that poor peer relations during adolescence is one of the best, if not the best, predictor of concurrent and subsequent social and psychological pathology of all kinds (Roff, 1963; Roff, Sells, & Golden, 1972).

Most theorists of the adolescent period have claimed that peer relations in adolescence are indispensable to normal development. No matter how democratic parenting practices are, authority in the family tilts toward parents. Until late adolescence, they have the power and they are bigger. Therefore, moral autonomy, Piaget (1932) claims, cannot be learned in the family. The acquisition of democratic norms, norms of equality and equity, require transactions with equals. Otherwise rules never lose the reality with which children imbue them. Only through day-to-day interactions with peers do rules come to be construed as conventions. It follows that the modulation of sexual and aggressive impulses is unlikely to be learned in the family:

> Effective aggressive socialization requires a certain number of *equalitarian* experiences--that is, semi-aggressive and aggressive encounters which are sometimes successful and sometimes not. Only in rough and tumble interactions with peers are such opportunities maximized (Harlow, 1969).

Similarly, Hartup (1977) asks, "What chance, after all, does the child have in either a fist fight or a shouting match with a fully mature adult?" (p. 174). He points out that

> The experimentation necessary to the establishment of adult sexual behavior is no more compatible with the parent-child relationship than the experimentation necessary to the socialization of aggression (p. 174).

In addition, the peer group may provide the models and the support necessary for transforming parent-child attachments at adolescence. Steinberg (1977) argues that increases in adolescent boys' interpersonal assertiveness in family relations at puberty may result from the importation into the family of assertiveness reinforced by the peer group at puberty. The family, then, is called upon to respond to and shape further change. And Douvan and Adelson (1966) have argued, in general, that a certain degree of behavioral autonomy learned and reinforced in peer groups may provide the security that makes increasing emotional separation from parents possible.

Those behaviors associated with the notion of intimacy are likely to be first practiced with peers as well. The degree of sharing of private experience, or self-disclosure, implied in the notion of intimacy more probably is first learned with same-sex peers than with parents (Douvan & Adelson, 1966; Sullivan, 1958). And the peer group has been held to provide necessary support for the resolution of the identity crisis (Erikson, 1968). It provides an audience for trial identities. Its badges, symbols, and fads provide the protection of a ready facade when who and what one is may not be clear at all.

Schools. Not much is known about how familial responsiveness to the primary changes produces secondary changes in psychosocial development. There is a more substantial theoretical and empirical basis for peer influences (even though the bulk of the information could not be reviewed above). In relation to schools, very little is known about the impacts of student roles on psychosocial development before during, and after the puberal cycle. We do not have information on the impacts of various schooling arrangements upon attitudes toward school and education and upon performance on standardized achievement tests and laboratory learning tasks. What we lack is information about the impacts of

such arrangements on changes in adolescent social behavior. There is not a body of research on how various instructional arrangements or curricular contents influence the course of development of autonomy, sexuality, identity, or other outcomes.

In considering these issues, it is useful to distinguish between changes due to schooling arrangements that are effected through *student* roles and those that are effected through *peer* roles. Organized curricular and co-curricular activities generate and maintain many (if not most) occasions for "unsponsored" social relations among young people. Schooling arrangements thus may affect social development, intentionally or unintentionally, through planned channels that involve the adolescent acting as student or through unplanned channels that involve the student acting as friend, clique member, and the like. Thus, it is quite possible that planned variations in schooling affect the development of autonomy, for example, because they involve teaching and learning arrangements that facilitate individual initiative and responsibility or because they generate, promote, and maintain spontaneous associations among peers that persist, in patterned ways, outside the teaching/learning situation. ("Student" and "peer" effects may, of course, be additive or interactive.) From the point of view of an educator evaluating tracking arrangements, for example, it would appear to be important whether or not any effects obtained are due to educational practice or related peer associations, if only to discard, modify, or retain the practice in question.

In fact the latter example is beyond the state of the art. As Bossert (1978) has pointed out, the typical strategy in dealing with schooling effects has been to consider the school as a "black box":

> Much of the research on school structures has not specified variables that adequately represent the settings in which learning actually occurs. A related problem pertains to the lack of specification of processes by which structural properties attain their effects. Mechanisms that link environmental characteristics to specific outcomes are rarely examined.
>
> . . . These problems derive from the lack of penetration into the school. The schooling environment, whether it is the classroom curriculum track, or entire school usually is treated as a "black box" . . . (p. 1).

Bossert has suggested one promising remedy for this problem, namely to study the actual activities that take place in instructional situations. He suggests that what is important for social (and cognitive)

development in the student role is *what goes on in the classrooms.* Whether a school is "open," "alternative," or "traditional" or whether a middle school makes a difference is ultimately a matter of what happens in teaching and learning situations. He proposes that these be studied directly.

Alternatively, to study the impact of schooling arrangements upon social development *through peer relations,* it may be useful to examine the patterns of social relations generated by particular structural arrangements in schools. For example, tracking may exercise effects on social development, as Rosenbaum (1975) proposes, because "track placements become the new basis for formal and informal interaction; neighborhood friendships dissolve and track-based friendships supplant them" (p. 160). From this perspective, comparing effects of tracking vs. nontracking on social development implies the study of the extra-classroom peer associations that tracking and its alternatives generate and, in turn, examining the effects of these associations upon social development. In presenting research recommendations, I shall elaborate more on both of these approaches to demystifying the black box. In the absence of systematic inquiry about the effects of secondary schools on changes in social behavior during adolescence, the literature to be reviewed here will focus upon consequences for social behavior of school size, school context, classroom climate and school organization.

Studies of *school size* have, for the most part, focused upon effects on participation in extracurricular activities. Students in small schools participate in the same *number*, but in a wider variety of, extracurricular settings than do large school students. A larger proportion of students in the small schools occupy leadership positions and they hold these positions in a wider variety of activities than do students in a large school (Barker & Gump, 1964). These findings have been confirmed in a number of related studies (Barid, 1969; Kleinert, 1969; Schoo, 1970; Thomas, 1954; Wicker, 1969; and Willems, 1967). Willems identified "sense of obligation to participate" as a mediating social-psychological variable between size and participation. Small school students had a greater sense of obligation, in general; however, marginal students in the small schools had as much a sense of obligation as did regular students while marginal students in the larger school were "outside the system." While intriguing, this finding is difficult to evaluate in the absence of longitudinal data since it is not clear whether integration into the social system follows from or precipitates marginality.

The studies on size also have been limited in scope. There is not a body of work that takes the impact of size one step further to trace its impacts on development. Only two studies of this sort were located. Thomas (1954) found that student participation in extracurricular activities bore the strongest relation to dropping-out of any of the ten variables he examined. Again, in the absence of longitudinal data, it is extraordinarily difficult to disentangle cause from effect. Dropping-out and lack of participation may be related through a third variable.

Similarly, Grabe (1975) found that participation in extracurricular activities positively correlated with a measure of self-concept (and particularly in juniors and seniors in smaller schools). However, once again, the direction of causality here is difficult to pin down: is positive self-concept a basis for participation or the result of it?

What are the consequences of lack of participation? For some students in urban areas, the consequences may be minimal owing to the presence of neighborhood or recreation-oriented reference groups. For others, lack of participation--if it betokens social isolation (which is not necessarily the case)--may be disastrous. At present, by and large, we *assume* that participation is positive and lack of participation is negative.

Effects of *school composition* on educational and occupational aspirations have received considerable study, perhaps more than any other single domain of research having to do with secondary schools and socialization. For a time, it was concluded that the majority social class in a given school tilted *average* aspirations in its favor: that is, working-class students in a predominantly middle-class school were thought to have higher aspirations than if they were in a predominantly working class school and *vice versa*. However, more recent studies suggest that when an appropriate analytical model is employed, such effects are insignificant. Instead, individual level variables (most importantly, encouragement of one's parents and plans of one's peers) carry the strongest influence. There is no strong evidence either for the significance of other context effects, including neighborhood status, ability composition, neighborhood racial composition, or forced and voluntary busing. These conclusions come from Spenner and Featherman's (in press) recent review of this literature: "It is fair to conclude that a sociologically significant effect of schools per se on achievement aspirations has yet to be demonstrated, apart from any effects of individual-level characteristics." While context effects do not impact strongly upon achievement ambitions, this is not to say that contextual effects do not exist for other aspects of psychosocial development during adolescence. However, the search for such effects does not seem to have begun.

A growing body of research on *classroom climate* is based upon the Classroom Environment Scale (CES) developed by Moos and Trickett (1974):

> The Classroom Environment Scale (CES) assesses the social climates of junior high and high-school classrooms. It focuses on the measurement and description of teacher-student and student-student relationships and on the type of organizational structure of a classroom. . . . The basic assumption is that the consensus of individuals when characterizing their environment constitutes a measure of environmental

> climate and that this climate exerts a directional influence on behavior (p. 1).

Students respond to a set of items which are arrayed into nine sub-scales: involvement, affiliation, teacher support, task orientation, competition, order and organization, rule clarity, teacher control, and innovation. Differences are reported among subject-matter classes: e.g., ". . . Rule Clarity and Teacher Control are most important in Business and Technical and least important in English and Social Studies classes" (p. 5). CES profiles have been found to correlate with student satisfaction with classrooms (greater satisfaction with greater involvement, innovation, clarity of rules); and with mood (more anger when there is little support and low order and organization; Tricket & Moos, 1974); students' perceptions of how much is learned (more with clarity, involvement, order and organization, support, and competition; Tricket & Moos, 1974); and absenteeism (more with low involvement, teacher support, and innovation; Moos & Trickett, 1974). However, on the personality and sociometric variables examined so far (Machiavellianism, self-reported sociometric influence, and sociometric influence as perceived by classmates) correlations with CES sub-scales are low: "These results are consistent with other findings which indicate that individual personality and background characteristics generally show only very low correlations with perceptions of the social environment (see Moos, 1974a and 1974b, Chapter 3)" (Moos & Trickett, 1974, p. 17).

The effects of *school organization* on social development are beginning to receive some attention. Most of the research has focused upon the transition to junior high school and upon the controversy between proponents of middle and junior high schools. The latter research has been reviewed by Gatewood (1971) and Schoo (1970, 1973). The great bulk of it demonstrates no difference in a variety of educational practices between middle and junior high schools. In nearly two dozen studies cited by Gatewood (1971), for example, no differences were found in curriculum, in teacher classroom behavior, in academic progress, student load, or co-curricular activities:

> Implementation of the middle-school concept, either by middle schools or junior high schools, exists more in ideal than in reality. In fact, middle schools have been established for reasons more administrative than educational (Gatewood, 1971, p. 273).

Apparently junior high schools are just as close to the middle-school concept in practice as are middle schools. And both remain in practice a substantial distance from the conceptual basis for their founding: to recognize *programmatically* major individual differences in biological maturation and concomitant social maturation within their student bodies.

Very few of the junior high school and middle school studies go beyond the comparison of educational practices to measure and to compare social developmental outcomes. Since it is reasonable to argue that effects on social development may have nothing to do with educational practices but, instead, with the school-related network of peer associations, studies of social developmental outcomes might well show differences.

Shovlin (1967) compared some effects on social behavior of being a sixth grader in an elementary school with being a sixth grader in a middle school. Interest in dating and the opposite sex was far greater for girls and somewhat greater for boys in the middle-school environment than in the elementary-school environment. Mildly oppositional behavior (liking school less, arguing with parents about how time is spent, letting study go to be with friends, not confiding in parents) was higher for boys than girls in both environments but was more likely to be reported for both boys and girls in the middle school. While elementary sixth-grade boys and girls did not differ much in their concern about "not belonging," this concern was greater for girls in the middle school. Perhaps the most interesting effect was that on self-esteem: in the elementary school, boys felt much better about themselves than did girls while in the middle school the difference was in the opposite direction. Middle-school girls felt slightly better about themselves than did girls in elementary environments while boys in middle schools liked themselves quite a bit less than those in elementary environments.

This set of findings seems to follow from the fact that more of the sixth-grade girls than boys are in the puberal cycle. Therefore, in the middle school which contains older boys and girls, they are more subject to role expectations responsive to their maturity. Sixth-grade boys are less mature than the majority of their peers in the middle-school and the most physically mature of the males in the elementary school. In a society where prestige and status are correlated with size and athletic ability, this counts for a lot, and one sees its effects in a much lower self-concept for middle-school boys than for elementary-school boys. (It is also of interest to note that the gender differentiation in performance in mathematics and science generally associated with early adolescence also shows up in this study in relation to science. Boys and girls performed about the same in science in elementary school. However, girls' performance in science in the middle school was substantially lower. The middle school apparently accelerates gender-related phenomena associated with achievement as much as it does with social behavior.)

Not all studies have reported differences between middle school and junior high school experiences for students at the same grade level. Schoo (1970), for example, found no differences between seventh- and eighth-graders' experiences in three different school

contexts (5-8, 6-8, 7-9) in: personal self-concept, school self-concept, matters concerned with dating, belonging, independence, concentration on vocation or satisfaction with curriculum, teachers, peers, or school in general. Only social self-concept was affected by organization, with the traditional junior high school having the most positive effect. However, in this study most of the variables did vary significantly with school size and since analyses of organizational differences did not take size into account, the data are difficult to interpret.

Schoo did find differences between the entry level grade in each of the schools. By and large the differences favored the fifth graders. Schoo concludes that the differences occur because fifth- to eighth-grade schools do a better job with entry level students (presumably because they are more oriented to elementary than to secondary educational practices). This conclusion ignores the confounding of entry into sixth and seventh grades in the other two school forms and entry into the puberal cycle for many students. Their "poorer adjustment" may be attributed to puberty as well as to school transition (or, more likely, to both). Indeed, the work of Simmons, Blyth, and colleagues (see below) has suggested that transition to a new school is especially likely to be difficult when it is accompanied by the onset of puberty.

Results from a longitudinal program of research comparing the impacts of moving from sixth to seventh grade in a K-8 school versus making the transition when the seventh grade is in a junior high (6-3-3 plan) are now beginning to be reported (Blyth, Simmons, & Bush, in press). In the sixth grade, the students in the two contexts differed in the following ways:

1. K-8 students dated more, were victimized more, and preferred to be with their close friends more than did K-6 students.

2. K-6 students were more likely to be academically-oriented and seemed to have internalized a greater sense of responsibility than the K-8 students.

And there were changes as the sixth-graders moved into the seventh grade in the two contexts (the information here refers to change scores):

1. K-8 students became more positive about themselves, felt less anonymous, and participated in more activities.

2. Seventh graders going to junior high school felt less positive about themselves, decreased their participation, and felt more anonymous in their environment.

3. Junior-high seventh graders were much more likely to experience an act of victimization than were their counterparts in K-8 schools.

As the authors point out, causal attributions are difficult in light of the larger school size of junior highs, their older age range, and the departmental classroom organization employed:

> Future analyses will attempt to further identify the causes and consequences of these differences in socialization experiences and their implications for youth. Several important questions need to be answered. Are these effects long-lasting or simply temporary phenomena which will disappear and perhaps even strengthen the youth's ability to cope with transitions? Are there subgroups of individuals who are particularly vulnerable to such changes and which may be helped by an awareness of the problems that they are likely to face? (Blyth et al., in press).

These studies have been described at length because they illustrate that school organization at this macro-structural level does appear to have impacts upon social development that may be important to understand in terms of decisions about structure and program.

What can be said by way of summary about research on secondary school effects in relation to the model for social development?

--While differential biological maturation provides the rationale for the advent of middle schools and, to some extent, junior high schools, there is no research that actually examines the experience of various maturity groups in the student role and there appear to be no reported instances of research on programs that attempt to individualize instruction as a function of biological or social maturity.

--Secondary schools have not paid much attention to what is known about cognitive development during adolescence in the design of programs that deal with the social domain (e.g., social studies, see Peal, 1977).

--Except for the scraps of information that may be gleaned from one or two studies, we have no systematic information about the relation between secondary schools and transformations in attachments to parents and the development of autonomy.

--How the student role impacts on the development of intimacy and sexuality is not at all understood, despite attempts, through parenting programs, to improve sensitivity to others, and through sexual education programs, to influence sexual development.

--Although we know a great deal, comparatively, about the sources of achievement aspirations, we do not understand much of anything about the school's contribution to creating them. Studies of tracking may provide some leads here. There are few studies documenting the process of achievement/ability differentiation in early adolescence which directs women out of math and science (although this may operate through the *peer* rather than the *student* role).

--While school-related determinants of self-esteem are studied from time to time, there has been no systematic research examining the effects of the student role on identity development. Are there ways that things are done in schools that impact upon identity development? If there are very few affirmed ways of making it in a given school, if there are few real options, if there are few opportunities for exploration, there should be effects on self-conceptions and not only on self-esteem; yet these have not been explored.

Research that is available on schools and socialization is fragmented and not programmatic; does not explore a very wide array of outcome variables; is not oriented to *change in behavior* during adolescence (that is, to development); treats the school as a black box; and is sparse. From the existing literature, it is not at all clear what socialization is occurring when the adolescent occupies student as opposed to peer roles. In light of the present research a reasonable and provocative question is whether there *are* important impacts of schools on social development that are not mediated through peer associational networks.

Work. While by the end of the high school years a majority of adolescents have had work experience, next to nothing is known about the effects of work on social development (Social Research Group, 1973).[3] Such studies as there are of this issue do not permit causal inferences. Thus, when there is the suggestion that work (*versus* non-work) is associated with greater self-esteem, it is impossible to disentangle cause from effect in the present handful of studies.

Research on the impacts of work on social development requires the dimensionalization of the work experience. While the implication may be drawn from the Coleman report, for example, that work fosters the development of autonomy, initiative, and responsibility, it seems unlikely that this will occur under conditions of close, niggling supervision. In addition to the nature of the supervision provided, Greenberger and Steinberg (1978) suggest the examination of other dimensions which one might expect to be differentially correlated with social

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[3]Since the initial preparation of this paper, an important exception to this generalization has emerged in the program of research on work directed by Greenberger and Steinberg (see for example Steinberg, Greenberger, Vaux, and Ruggiero, 1981).

developmental outcomes: the degree to which social interaction occurs on the job and the degree to which jobs require initiative, responsibility, and contact with adults.

Conclusions

A heuristic model of development during adolescence has been presented as a means of highlighting major issues and institutions of the period. The presentation of the model is intended to focus attention on issues by and large ignored in recent policy initiatives with their focus on the "transition to adulthood." In such formulations, adulthood has come to be defined almost solely in terms of work and adolescence as a matter of job preparation. Socialization for family and other social roles has been largely ignored. And by their emphasis on transition, recent policy reports deemphasize the lengthening period of adolescence and the changes that take place within the period. Accordingly, early adolescence is slighted. The model calls attention to the adaptations families, peer groups, and schools do, might, or should make in early adolescence which may, in fact, exercise considerable influence upon the course of later adolescence and the "transition to adulthood."

Finally, explication of the model has permitted some attention to be given to the state of our basic knowledge about social development during adolescence. Two conclusions follow from this brief review. (See Hill, 1973 and Hill & Monks, 1977 for lengthier treatments.) First, research on the psychosocial issues of adolescent development is extraordinarily limited and policy makers and practitioners do not have anywhere near the resource base in basic research that is available in the early childhood area (especially in relation to the family and the school). Second, available research shares with recent policy efforts the deficiency of being based largely upon studies of males, and middle-class males at that. These considerations are reflected in the recommendations for research which follow.[4]

Research Recommendations

Two contexts have been provided for considering recommendations for a research agenda: the first, a consideration of the policy initiatives suggested in three reports following hard upon the turmoil of the later 1960's and early 1970's, and the second, a heuristic model for social development during adolescence designed to focus attention on some of the enduring problems of social development. Each of the

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[4]The "heuristic model" for the study of adolescent development presented here has been further developed and published in a format suitable for students and practitioners by the Center for Early Adolescence of the University of North Carolina. See Hill (1980).

contexts taken separately and the interplay between them have served to generate two kinds of research recommendations on secondary schools, socialization, and social development. The first of the two sets of recommendations is a research agenda of substantive issues that, in my judgment, should have priority in this area. The second of the two sets of recommendations deals with some of the attributes that might characterize the recommended research or any other research dealing with secondary schools, socialization, and social development.

A Research Agenda

In order to study the effects of secondary schools on socialization and social development, we must begin to develop more sophisticated concepts and measurements of school environments and these must be case in developmentally-coordinate terms. For this reason first priority is placed in these recommendations upon the problem of describing secondary schools as environments for development.

1. Studies of schools as environments for social development ought to be vigorously pursued. Until variables descriptive of school environments are conceptualized and measured in ways that permit linkages to developmental events, studies of secondary schools and socialization are likely to be sterile and unrewarding for policymakers, practitioners, and scientists concerned with adolescent development. At present, labels (e.g., tracking, middle school, alternative school) often take the place of carefully conceptualized sets of measurements that might better inform us of adolescents' school experiences.

Two leads ought to be pursued in this regard. One is a research agenda proposed by Bossert (1978) who argues for the study of activities in schools:

> An activity structures model . . . focuses attention on factors which shape social interaction within a setting and on the social context in which interpersonal assessments and influence occur. The structure of activities frames social reinforcement. It influences who interacts with whom, the nature of the interaction, and the meaning of behavior and communications. Activity structures affect moral socialization by defining the opportunities for and nature of interpersonal influence and reference group comparisons (p. 35).
>
> Independence, autonomy, and self-direction may have their antecedents in patterns of interaction that arise from certain structures of activities. Dreeban (1969), for example, noted that self-sufficiency is

> reinforced in activities that involve individual rather than group work. Learning to work alone necessitates breaking patterns of dependency which can develop from cooperative tasks (like most of those experienced in the family). Any division of labor within an activity precludes reward structures that are clearly based on individual performance, thus limiting social reinforcement for independent work. . . . Students in classrooms that relied heavily on group recitation and seatwork--tasks which entail high levels of teacher control--showed little self-directed behavior when confronted with new, fairly undefined activity settings. When learning to work alone, these students were dependent on their teachers for specification of proper work procedures. By contrast children from classes that employed numerous individual and small group projects in which they were encouraged to choose and organize their own tasks learned to begin new activities on their own without waiting for detailed instructions (sometimes to the dismay of their teachers). Participation in different activity structures, therefore, may reinforce distinctive patterns of interpersonal relations and, hence, engender different normative orientation (pp. 41-42).

I have quoted at length from Bossert to illuminate the meaning of studying activity in schools. Bossert suggests that we focus upon activity structures and given his preliminary results, this does seem to be one of the more promising ways of describing school environments. It is not educational planners' *labels* that should constitute our independent variables; it is what goes on in schools. In relation to the more commonly employed independent variables, we then should be asking: Does tracking change the activities engaged in teaching and learning situations? How? How do the characteristic activities associated with given kinds of tracking influence social development? How do middle schools differ from junior high schools, if at all, in terms of the activities that are typically generated? Do these differences in activities relate to the development of initiative and responsibility? Passivity? Do "houses" or "schools within schools" differ in relation to typical activities? Are the differences related to some social developmental outcome of interest?

A second lead in relation to secondary school environments is to consider the patterns of social relations generated by particular structural arrangements. In comparing junior high schools with middle-schools, for example, it is implicitly assumed that the effects are mediated by changes in patterns of social relations--in this particular case, reductions in cross-age interaction--yet the patterns of social

relations are never measured. We have already cited Rosenbaum's (1975) observation that tracking generates a basis for peer associations that may replace neighborhood associations. From this point of view a school structure is said to attain its effects on social development through the patterns of social relations it generates.

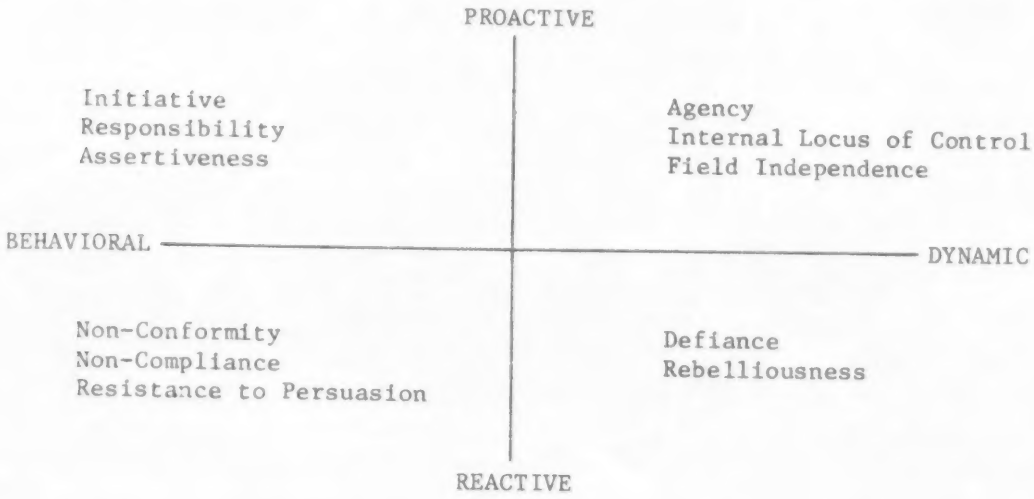
Various dispersion programs and other structural arrangements are advocated because they are presumed to expand or restrict the range of adolescent social relations and because such expansion or restriction, in turn, is anticipated to facilitate adolescent social development (e.g., "stop them from growing up so fast;" "expose young people to a greater variety of occupational models"). What we need to look at empirically is not the label but the social environment that is actually implemented. Does the work apprenticeship program increase cross-age interaction with diverse people? Does putting the ninth graders back into the high school decrease the upward cross-age interaction of the seventh and eighth grader? Does cross-social-class interaction increase when a school does away with tracking? And if any of these patterns of social relations do occur, what are their effects on social development?

These two approaches are not incompatible. The emphasis on activities calls attention to the potential determination of social development through the student role, and the emphasis on patterns of social relations calls attention to the determination of social development through the peer role. Both, of course, may occur in relation to the same or different developmental outcomes as a function of change or variation in school practice. The general point is that, at present, in most studies of school effects, the independent variables are sufficiently distal from the dependent variables as to render understanding of the processes or mechanisms involved impossible.

2. Studies of the effects of teaching and learning situations in secondary schools upon the development of autonomy ought to receive greater attention in view of the presistent concern of social critics, policy analysts, and social scientists with this issue and in light of the absence of information about it. Such research will require more careful conceptualization of what is meant by *autonomy* than yet appears in very many places in the literature.

Douvan and Adelson (1966) have distinguished between emotional, behavioral, moral, and value autonomy and their discussion of the issues involved provides fruitful leads. Discussions of the subject in the recent policy reports focus most upon behavioral autonomy, with a seeming emphasis upon "self-starting" in task situations, independently carrying through a task to completion without close monitoring, weighing several alternatives in coming to one's own decision as opposed to bending to the desires of those in the immediate social environment.

In reviewing the empirical literature on the development of autonomy during adolescence, Hill and Steinberg (in preparation) suggest that most extant conceptions of autonomy cluster on two dimensions: proactive-reactive and dynamic-behavioral. That is, autonomy has been regarded by researchers as a matter of (negative) responsiveness to the initiatives of others--as a *reactive* phenomenon--and as a matter of actively defining and dealing with a situation--as a *proactive* phenomenon. Like most social-behavior domains in psychology, the term has origins in both *behavioral* (e.g., social learning theory) and *dynamic* (e.g., psychoanalytic) camps. Crossing these two dimensions highlights differences between some of the common conceptual and operational definitions of autonomy, as is revealed in the tabulation below:



In the four-fold tabulation that results from crossing the two dimensions we have inserted some of the common names for concepts and operations called autonomy in the literature. It is by no means certain that measurements taken on the same sample from all four cells would be highly intercorrelated. Indeed it is more likely that they would not be (Hill & Steinberg, in press); autonomy is probably *not* usefully regarded as a trait. The table is present here because suggested policy initiatives and the discussions of social critics often appear to assume such intercorrelations and because correlates relating to teaching and learning roles may vary from the kinds of outcomes suggested in each cell (although, interestingly enough, as we have said in relation to parenting practices--no matter how autonomy is defined, authoritarian socialization patterns in adolescence seem to be negatively correlated with it).

On the side of independent (in this case, secondary school) variables, activity structures (à la Bossert) and disciplinary practices would appear to be the most likely candidates for study. What activity structures encourage autonomy, particularly of the proactive behavioral kinds? Does this autonomy generalize to other situations in school? Outside school? Work? What patterns of discipline in schools and classrooms foster what kinds of autonomy? In what settings? How are the relations between discipline and autonomy moderated by social class, typical parental practices, teacher and administrator attitudes, and the like?

In studies of this sort, it will be important to consider effects of different kinds of activity structures and discipline upon males *and* females, young people of diverse social and ethnic backgrounds, and young people of diverse experiences prior to adolescence. It would be most useful if programs of research on these issues included those based upon "natural" variations and planned variations (experiments) in secondary school activities.

3. Studies which test the effects on social development of curricular and instructional approaches specifically designed to deal in some way or ways with the biological heterogeneity of early adolescent populations ought to be funded. Given that neither the middle school nor the junior high school apparently deals very effectively with the heterogeneity of development in the population it serves during early adolescence, and given that changes in what grades are housed in a building do not appear to change programs, it seems appropriate to encourage research on experimental programs. These might be of a wide variety of sorts. Early- and late-maturing boys and girls appear to be at some risk depending upon the school setting and programs that might be targeted for them. On the other hand, to avoid stigmatization and to make the programs more attractive, programs might be made generally available. Program contents might include individual counselling; group counselling designed to deal with "beginning dating"; expanding competitive opportunities for boys at every age and ability level (at present, school-wide representation is often restricted to single, school-wide teams of ninth-graders; there is no reason why a number of teams from each grade level and a variety of ability levels could not represent given schools); grouping students by maturational level for some classes and activities; and expanding options, alternatives, and opportunities for exploration of disciplines, vocations, avocations, and leisure-time activities. Research on such programs ought not only to look for developmental outcomes but also to monitor impacts upon patterns of social relations, especially cross-age interaction.

4. Studies which examine the effects upon social development of curricular and instructional approaches specifically designed to deal in some way or ways with changes in social-cognitive ability during adolescence ought to be funded. The plea here is not for "training studies" designed to demonstrate or to accelerate the acquisition of social-cognitive skills. Rather it is for exploring the adaptation of instructional strategies and curricula--particularly in human development, social studies, home economics, health education, creative writing, drama, and the like--to capitalize on adolescents' emergent abilities to see other people and to make inferences about them in reference to an implicit personality theory; to make multiple perspectives on people and social events; and to apply principles to social situations in making judgments (Hill & Palmquist; 1978). Research on such programs ought to explore social developmental outcomes of interest (recall that the outcomes of adolescent development as described by our most influential theorists seem to *require* sophisticated social cognition skills for their resolution). The activity structures that may mediate the outcomes ought also to be identified and studied.

5. Control, authority, and discipline in secondary schools needs more research, especially since these have emerged as issues in a variety of contexts. Discipline in schools often ranks highest on the list of public concerns about schools in the Gallup polls. Authoritarianism in schools has been a persistent concern of their critics. Control over youngsters, particularly junior high school students, is often advocated on the basis of a natural rebelliousness which needs to be curbed if effective education is to take place. Working-class and middle-class parents differ in their views as to conformity to internal standards and conformity to external authority. Many upper-middle class parents view many suburban schools as disastrous for the development of their young because their repression inhibits self-actualization. Many lower-class parents view many urban schools as disastrous for the development of their young because their lack of order inhibits achievement and upward mobility. Given this welter of concerns, it would appear that we could profit from some research on the social psychology of control, authority, and discipline in the schools.

The conclusions of the recent reports on violence in the schools (National Institute of Education, 1978) are of interest in relation to this set of issues. Violence is less likely where principals are firm in enforcing rules and the amount of control, where students perceive the control to be fair, and where students feel that they have some control over their lives. Similarly vandalism is less likely if there is firm and fair rule enforcement and if teachers are not authoritarian and hostile. There are other correlates but--

as in the family (see above)--problematic behavior is less likely if disciplinary practices are neither arbitrarily strict nor indulgently permissive.

These findings barely scratch the surface, however. We need to understand the interrelations among community, school personnel, and young people's attitudes toward discipline in the schools, in urban and suburban settings of varying social class composition. We know nothing about effects of school discipline and rule enforcement on aspects of social development other than aggression. What of the development of moral judgments, of role-taking, of understanding social conventions? Are there any persistent effects on development of school disciplinary practices? How are these mediated by peer associational networks? The public views discipline in the schools as a problem. How is the problem defined in communities of varying characteristics? Are disciplinary practices in schools keyed at all to the primary changes (e.g., do older students get more explanations?) and, if so, to what effect? On what aspects of social development?

Recommended Attributes

It is my purpose here to suggest some attributes by which proposed research on the effects of secondary schooling on social development might usefully be evaluated. While the recommendations may at first glance seem obvious, the design features to which they refer are more conspicuously absent than present in the existing literature on the effects of educational variations at any age level.

1. Research on the effects of interventions or variations in school programs (e.g., dispersion) on social development ought to measure the extent to which the intervention actually is implemented rather than assuming that the program, as verbally described, actually occurred. This recommendation has several sources. In evaluations of Head Start and similar programs, for example, it has been commonplace to compare children with and without Head Start experience. Such research is only minimally informative given the wide range of local variations in what actually happens to children in programs bearing the same Head Start label. Only when the independent variables that together constitute the intervention--or some of them--can be specified, measured and their individual and conjoint effects on development studied, can we begin to understand how and why the intervention achieves its effectiveness. Studies of the sort recommended here--whether intended to be "basic" or "applied"--can contribute to the store of basic knowledge *and* provide data for program improvement that the more usual studies cannot.

2. *Research on the effects of interventions or variations ought to measure the developmental outcome the program is supposed to produce rather than assuming that the outcome follows from participation in the program as labelled or described.* Athletic programs, recreational programs, sex education efforts, and parenting education are traditionally justified, supported, or proposed on the basis that they change attitudes, develop self-confidence, self-understanding or misunderstanding, promote self-esteem and greater social responsibility, or teach cooperation, team work, and self-discipline. Research demonstrating the impact of such programs on behavioral change in adolescence is, however, relatively rare and, when completed, rarely finds its way into the archival literature.

3. *Short-term longitudinal strategies are required to understand what the causal linkages are in studying secondary schools, socialization, and social development.* We have seen how the few existing studies of the effects of school and work could have been much improved had they been longitudinal in nature. Studies which simultaneously track the implementation of a planned or unplanned variation in school programs *and* social development over time give the greatest promise of understanding impacts of secondary school on social development because the possibility of detecting what is causal is far greater when the events in question can be ordered over time. Finally, there is no substitute for longitudinal data when one wishes to speak of influences on *development* and to take development, meaning changes in behavior over time, seriously.

4. *Research on the effects of interventions or variations ought to be framed in terms of its potential costs as well as benefits.* Research on interventions which is done to make go-no go decisions (as opposed to research framed for the purpose of better understanding an educational process in relation to its outcomes) is especially likely to focus on the putative advantages of the effort alone. Certain kinds of school organization, for example, are favorably considered because they restrict the interaction of younger adolescents with older adolescents (e.g., the middle school). Research might therefore be proposed to determine whether or not cross age interaction and problematic behavior are reduced. Assuming that this is what happens, it may also be the case that restricting interaction with older adolescents merely postpones the learning necessary for modulating the behavior in question and perhaps even postpones it to a period when the environmental demands to engage in the proscribed behavior are sufficiently great that learning is more difficult. Similar research based on the notion that slightly older peer models have only

negative effects--the most common assumption of school personnel, in my experience--ought also to consider that older peers might also model hard work, better control of aggressive impulses, social graces, and the like.

5. *Research on the effects of interventions or variations ought to consider differential effects by gender, social class, and cultural background.* The recommendations of the Coleman Report appear to have been directed at white, middle-class males. It has been argued that its recommendations, and those of the other reports, if implemented might actually increase inequities (e.g., Timpane et al., 1975). There is the possibility, for example, that dispersion programs intended for the deprived may actually be used by the advantaged; there is the possibility that other programs intended for general use are in fact the mechanism for pushing troublemakers and malcontents out of the schools. Policy-related research ought certainly to recognize and to be responsibe to the heterogeneity of the population being served by secondary schools. Probably social class and gender biases in the classic formulations of the adolescent period have already been noted in the discussion of the secondary (psychosocial) changes of adolescence above. And since these concepts dominate thinking about adolescent development, they are likely to influence the basic formulations, the design, and the analyses of research programs and projects as well.

6. *Research on the effects of interventions or variations are likely to be more useful to the extent that they are "conjoint" in nature--that is, to the extent that they consider more than one context for development within the same design.* For example, studies of the effects of school discipline practices on the development of autonomy might well include investigation of family disciplinary practices within the same design. Doing so permits a superior assessment of the importance of any school effects. And, more importantly, it permits the detection of effects that arise precisely from the conjoint impact of the two settings rather than from one alone. For example, it is not unlikely that the adolescent's judgment of the fairness and legitimacy of school discipline is strongly influenced by what is the common disciplinary practice in the home.

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RESEARCH IN THE 1980s ON SECONDARY EDUCATION: A REVIEW AND A PROJECTION

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What are secondary schools for? What do they actually do? These are not new questions in the history of the American schooling system, and studies and projects in the past have been designed to address them. As public education has expanded to include virtually all of America's young people, answers to these questions have changed and have grown increasingly complex. Therefore, it is not surprising that these questions are again being raised and addressed in the early 1980s. Will this research activity produce anything that advances our understanding of the secondary school, or will it simply be a rehashing of questions examined through the use of well worn methods? What directions should research during the rest of the eighties take?

This report reviews sixteen studies that represent the major research efforts taking place in the early eighties on secondary education in the United States. Two criteria were used in selecting studies to review. First, they were large-scale studies, examining several schools; and second, they addressed secondary schooling in a fairly comprehensive manner--they did not just address one or two specific problems or programs. Some of the studies were near completion at the time of this writing, but some were just getting underway. This review was based on examinations of research proposals, data collection instruments and protocols, preliminary drafts of papers, technical reports, and telephone interviews with study directors.

The first section of this paper will summarize very briefly the purpose and methodology of each study.[1] The body of this paper will

[1]Each study is described in some detail in a lengthier version of this paper. It can be obtained for $8.50 from the Center Document Service, Wisconsin Center for Education Research, 1025 West Johnson Street, Madison, WI 53706.

then critique these studies, reviewing contributions they will make as a group, suggesting omissions or weaknesses in them, and making recommendations for future research on secondary education.

Overview of Sixteen Current Studies

Three central purposes have guided these sixteen studies: 1) to examine what schools actually do, and how and why they do it; 2) to examine how policies or other planned change efforts are actually translated into action in secondary schools; and 3) to provide an agenda for school improvement or school reform.

Four studies were designed primarily to examine what schools actually do: "High School and Beyond" (HSB)[2], John Goodlad's "A Study of Schooling" (SS), Mary Metz's study of magnet schools (MM), and Gerald Grant's study of five high schools (GG). "High School and Beyond" was designed to provide information about the educational and occupational plans and activities of students as they proceed through secondary school and on into adult roles, students' achievement levels and post high school careers, secondary schooling, and various factors that might influence students' achievement and subsequent careers. HSB is a longitudinal survey study; 36 seniors and 36 sophomores in each of 1015 high schools constitute the sample. Data so far have been collected through a set of questionnaires administered to each school, sample students, sibling twins of sample students, and teachers of sample students. Data are being analyzed using a variety of statistical procedures. "A Study of Schooling" (SS) was designed to examine what several "average" schools appear to be doing and why, and to simulate further study of what goes on in schools. Explicitly rejecting looking at school effects, SS is exploring relationships among variables internal to the daily life of schools. The sample consists of 38 public schools in thirteen "triples" (a triple includes a senior high, a junior high or middle school, and an elementary school in the same feeder system). Data were collected through questionnaires administered to staff members, students and community members; time sampled coded observations of classrooms; and structured interviews with staff members. Data are being analyzed using descriptive statistical procedures. Mary Metz's study of magnet schools (MM) was designed to examine the unique characters of specific schools, analyzing ways in which magnet characteristics blend in specific school settings to create unique wholes, and identifying sources of the schools' characters. It was also

[2]The acronym in parentheses will be used throughout this paper to refer to each study. Since some are popularly known by their titles, and others by their sponsors or principle investigators, these acronyms allow references here to be both short and consistent. An index that includes principal investigators of each study, with their addresses and telephone numbers, follows the conclusion of this paper.

designed to study the effects of school environments on schools. Three magnet schools in a large city were studied intensively for one semester each, using participant observation research methods. Gerald Grant's study (GG) was designed to examine how different school climates are created in different schools. Grant intensively studied five secondary schools that had very different climates from one another, also using participant observation research methods.

One of the sixteen studies--the Huron Institute's study of Experience Based Career Education (HI)--was designed primarily to examine how policies are actually translated into action in secondary schools. HI focused as much on the change process in schools as on EBCE itself, since close inspection revealed that different schools were using different EBCE models, many models were still in the process of being developed, and schools tended to adapt EBCE to suit their own local needs. Over a four year period, 35 local programs and 17 other state-level programs were studied through site visitations and telephone interviews.

Eleven of the sixteen studies are designed to set an agenda for school improvement or school reform. Three are addressing school improvement by identifying and describing existing effective schools. These include Joan Lipsitz's study of successful schools for early adolescents (JL), a study of effective schools for disadvantaged students (CVS), and the "Urban Education Studies" directed by Francis S. Chase (UES). Lipsitz used her study (JL) to develop a conceptual framework that distinguishes effective from successful schools, and then studied four middle schools that met her definition of success. She spent a total of seven days in each school, forming impressions about the schools' successes and reasons for their success. CVS was conducted jointly by NTS Research Corporation and the Bay Area Research Group for the purpose of improving urban schools for students of low-income families. Ten effective comprehensive and ten effective urban vocational high schools nationwide were selected by nomination. Each was visited for five days in order to find out what these schools were doing that made them more effective than other urban schools. "The Urban Education Studies" (UES) was designed to identify, describe and provide support for strategies that seem to contribute to the revitalization of urban schools and school systems. Over a four year period, research teams of about twelve members made site visits to sixteen school districts that had identified effective programs or strategies they were using. Observation, interview and documentary data were collected on how those programs or strategies work, and what their effects seem to be.

The other eight studies are addressing school improvement by providing an agenda for reform that goes beyond what schools are already doing. These eight include the Carnegie Foundation's "A Study of the American High School" (CF), "A Study of High Schools" chaired by

Theodore Sizer (TS), "Project on Alternatives in Education" directed by Mary Anne Raywid and Herbert Walberg (PAE), "Wisconsin Program for the Renewal and Improvement of Secondary Education" directed by Herbert Klausmeier (WRISE), "An Education of Value" sponsored by the National Academy of Education (EV), "Paidiea Program" directed by Mortimer Adler of the Institute for Philosophical Research (PP), "Project EQuality" sponsored by the College Board (TCB), and "Redefining General Education" sponsored by the Association for Supervision and Curriculum Development (RGE).

"A Study of the American High School" (CF), "A Study of High Schools" (TS), and the Project on Alternatives in Education" (PAE) will conduct fairly extensive literature reviews and collect new data on schools in a variety of ways, as well as offer reform proposals. CF proposes to examine the total high school agenda, the sequence of education in which the high school exists, and the history of high school reform efforts. It will conduct qualitative studies of fifteen high schools, site visitations to about 100 exemplary schools, and a national survey regarding school goals. Its reform plan will address classroom-level matters such as instruction and evaluation of students, school-level matters such as school goals and climates, and school district-level matters such as transitions into and out of high school. "A Study of High Schools (TS) proposes to examine the recent history of America's experience with the high school, particularly as it relates to conflicting claims about the purposes and premises of the high school, and to our knowledge of adolescent learning. TS has two main lines of inquiry--historical analysis, and field studies of fourteen high schools--both of which will focus primarily on the teacher-student-curriculum triangle, the forging of school climates of agreement and consensus, and common skills and concepts for all students within a pluralistic society. Its reform plan will be targeted toward improving intellectual development for all students, partly by making use of what we know about adolescent learning and partly by building more consensus at the school level about the purposes of schooling. The Project on Alternatives in Education (PAE) was designed to identify and examine different practices and environments that effectively serve different students in relation to different educational values. This project has a number of components for gathering data, including a national survey of alternative schools, intensive surveys of 100 alternative schools, case studies of 30 alternatives, and a study of 20 schools districts that are using alternatives as a renewal strategy. PAE's reform plan will recommend using alternatives as a vehicle for reform, and making schools more effective for and responsive to students whose values, goals and interests and approaches to learning differ.

A fourth study in which new data are being collected is Herbert Klausmeier's "Wisconsin Project for the Renewal and Improvement of Secondary Education" (WRISE). WRISE proposes that student achievement in basic skills and other areas can be improved by providing an educational program appropriate to each individual student. WRISE is conducting cooperative research in five secondary schools (two middle,

one junior high and two senior high), and developing, evaluating and disseminating materials to aid local school staffs in starting their own school improvement plans. The purpose of the cooperative research is to assess relationships between features of schools' improvement plans, which are directed toward providing education programs appropriate to each individual student, and gains in student achievement and other outcomes such as attendance.

The remaining four studies are not collecting new data. They are drawing primarily on literature review, thought and practitioner input for the designing of their reform proposals. The purpose of "An Education of Value" (EV) is to help educators and members of the public to examine and reach some consensus about their expectations of schools. This will be done by analyzing values underlying conflicting demands placed on schools, analyzing the social context in which education in its broadest sense takes place, and recommending a secondary-level curriculum of subject matter essential for all students in this country. The Paidiea Program (PP) is a reform proposal for grades K-12, that resulted from a series of task force meetings directed by Mortimer Adler over a two year period. It is aimed at the curriculum and instructional process, and recommends a rather specific curriculum for all students. Project EQuality (TCB) was designed to engage secondary schools and colleges cooperatively in improving the quality of secondary education while simultaneously extending equal opportunity for a college education. Based on three series of conferences, TCB has produced two sets of recommendations for college-bound students: a set of "Basic Academic Competencies" and a "Basic Academic Curriculum." Additional planned activities will further develop and implement these recommendations. Finally, "Redefining General Education" (RGE) proposes to reconceptualize required general education for high school graduates who will be living in the twenty-first century, and to redesign and pilot local high school programs. Seventeen participating schools will assess, redesign and implement their general education programs, and teams from these schools will periodically meet as a network to share ideas and receive help.

What New Insights Will be Gained?

Taken as a whole, the sixteen studies included in this review promise new insights and new information in several areas, including school processes, school diversity, effective secondary schools, and particular kinds of schools. They also promise a fresh look at other more familiar topics, including order and discipline, contexts of schooling, and transitions out of high school. In addition, they will offer several reform proposals.

School Processes

Several studies will provide detailed portraits of specific things inside the secondary school. In an effort to ascertain exactly what is being studied, data collection instruments and protocols of three studies were examined (CF, HSB, SS), reports of results of five studies were read (CVS, GG, HI, MM, UES), proposals were examined for two for which protocols or reports of results have not bee completed (PAE, TS), and the director of one was interviewed in detail (JL). Because at the time of this writing some studies were just getting underway and others were in the midst of being conducted, the following assessment is somewhat tentative.

Taken together, these studies will provide a quite comprehensive picture of what various school participants in many different schools see as the goals of the school, and how much consensus there is within schools over goals. We will learn, for example, what teachers, students and parents in different schools see as the mission of their school. There will also be many examinations of school climates: we will learn what kinds of climates various schools have, and what factors support their climates. These examinations however may not complement each other well, since different indicators of climates are being used in different studies. These indicators include academic emphasis, evidence of school pride, orderliness, degree of consensus about purposes, and the "feeling tone" of the school as experienced by teachers and students. Researchers will need to define clearly what they mean by climate when discussing results so that dissimilar constructs in different studies will not inadvertently be compared.

There is quite a bit of attention to decision making and the locus of authority in schools. For example, several studies are examining processes and participants in goal setting for the school, rule making, curriculum decision making, and principal selection. In most studies, the principal's leadership style is being studied, including his or her perceptions of the principal's role, actions within the school, supervision of instruction, visibility and influence within the school, and how he or she is perceived by others.

Teachers are occupying the attention of most researchers, but there is not a great deal of overlap in how teachers are being studied. The teacher-related variable most commonly being examined is teacher perceptions and expectations of their students. There is also attention in at least three studies each to the amount and kind of cooperation among teachers and the amount of autonomy teachers have; teacher morale, rewards and frustrations; and teachers' perceptions of their own roles. In addition, teacher-student relations are being examined in several studies, both by watching teachers and students interact, and by asking them about their perceptions of this relationship.

Curriculum and instruction is being examined in most studies, but again, most curriculum-related variables are common to few studies. At least four studies are giving close attention to the kinds of teaching strategies used in classrooms, and the amount of classroom time spent on instruction. Several other variables are receiving attention in at least three studies each: how teachers and students communicate in the context of instruction, how teachers evaluate and give feedback to students, and how much and what kind of homework students are given. Extracurricular activities are being examined in several studies to find out which students participate in which activities. Finally, students are being looked at in most studies; however, there is very little overlap in the student-related variables. The most common student-related variables include how much TV students watch and how it influences them, and students' personal goals and aspirations.

Most of the studies that are looking inside schools are also examining a host of other variables, many of which do not overlap with those in other studies. This is not a bad thing: researchers are currently in the process of discovering what is most significant about the internal processes of schools, and as different researchers undertake studies in different schools, with different goals and frameworks in mind, we can expect that new variables will be suggested and explored that more researchers may want to investigate in the future.

These studies are not only collecting data on variables; they are also making attempts to discover relationships among variables. Different methods are being used to do this. For those that are collecting a large amount of qualitative data (CF, GG, MM, PAE, TS), relationships among variables are being postulated on the basis of reports of causality in interviews, observation of related events, and analytic induction. Statistical analyses are also being used to discover relationships among variables in studies that collected quantifiable data (HSB, PAE, SS). To what extent results of these analyses will be complementary is impossible to assess at the time of this writing, since most of the studies are still in progress.

School Diversity

A more complex and diversified picture of secondary schools will be presented than we have had before. Past research on secondary schooling has tended to lump schools together, discussing either the "typical" high school, or broad categories of schools such as the rural school or the urban school, that are supposedly more alike than different. The researchers whose studies are reviewed here have uniformly rejected the assumption that schools are more alike than they are different for several reasons. First, Rutter's (1979) finding of distinct differences in learning climates among schools has oriented many researchers toward trying to find out why some schools have better learning climates than others. Second, different outcomes of similar policies in different schools (such as school desegregation) have

suggested that differences among schools are strong enough to influence a variety of school outcomes, and that effective policy implementation needs to be based on an understanding of how and why schools differ. And third, different interest groups (e.g., nonwhites, working class) whose schools tended to be glossed over in much previous work on schooling in the mainstream of American life and treated as special cases, have persuaded researchers not to leave them out: affirmative action has been taken seriously in recent sample selection procedures.

Researchers who conducted the studies reviewed here deliberately and consistently selected schools to study that maximize diversity. Typically, stratification factors for sample selection have included racial composition, enrollment, geographic location, socioeconomic status, and urban/suburban/rural location. Data collected in different schools have not been indiscriminantly aggregated. As a result, we should learn much about how and why schools differ, especially as it relates to stratification factors. By the same token, we will also learn what different schools actually have in common. There may well be as little diversity as depicted in the past, but those differences that exist will be highlighted and brought into focus.

Effective Secondary Schools

A number of descriptions of effective secondary schools will result from these studies as will discussions that make explicit different criteria for judging school effectiveness (CF, CVS, HI, JL, PAE, UES, and WRISE). What constitutes effectiveness at the secondary level, and what an effective secondary school looks like is a relatively new area of investigation. Probably the main value of these studies will be their offering of different definitions of effectiveness and their directing our attention toward school successes so that we might more intelligently improve secondary schooling.

Clearly, any designation of a school as "effective" requires a value judgment defining what makes a school experience "good." The same criteria for effectiveness are not being used in every study. Achievement in basic skills was the main criterion used in two studies (UES, WRISE), and an important one in others (CF, JL). CVS focuses more on preconditions to achievement, such as success with which a school holds its students and maintains order. CF, CVS and PAE also consider students' post high school occupational success in their definitions of effectiveness. JL expands on traditional definitions of effectiveness, drawing attention to the importance of meeting a variety of early adolescent developmental needs. HI draws upon and discusses local definitions of effectiveness, which vary somewhat. Finally, PAE argues that different value structures produce different definitions of effectiveness, and that no one value structure should be used to judge all schools. Discussions such as these about what constitutes school effectiveness are valuable. There is no clear consensus about what makes a school good, and consensus should not be assumed. Rather,

different points of view should be articulated so that open, debate can occur more readily.

Descriptions of effective secondary schools represent a refreshing departure from much past research that has either focused on the "average" school, or directed our attention toward our most unsuccessful schools. These descriptions will be helpful in at least three ways: they will demonstrate that "good" schools exist, even in inner city areas that have a reputation for being uniformly bad; they will show clearly the variety that excellence takes and demonstrate that there is no one model school; and they will give some idea how good schools came about and what particular factors are most supportive of successful programs. This does not mean that past and current research on average or below average schools is misdirected. It is not. But we also need to understand what schools considered effective actually do, and how and why they do it.

Specific Kinds of Schools

Specific kinds of schools that have not been studied much in the past have attracted the attention of some researchers whose studies are reviewed here. In particular, alternative schools will be studied very comprehensively by the Project on Alternatives in Education, and were also included as a special stratum in "High School and Beyond." Private schools are being included along with their public counterparts in several studies (GG, HSB, TS). In addition, some attention is being directed toward magnet schools (MM) and toward middle schools (JL, MM). While there is clearly more room for study of these and other kinds of schools, this research promises to broaden our knowledge about these kinds of schools.

Order and Discipline

A major focus in several studies is order and discipline (CF, CVS, GG, HSB, TS). This topic has been examined before; however, the state of order in high schools today is a concern to many people. For example, the Gallup Poll has provided an index of that concern, having found discipline to be the number one school concern of the public for several years (e.g., 1977, 1978, 1979).

Taken together, these studies will tell us quite a bit about order in today's secondary schools. We will have researchers' assessments of the general orderliness of about two dozen secondary schools that differ in terms of student population, enrollment size, urban/suburban/rural location, and the kind of school (e.g., public/private). We will know what rules and regulations exist in many secondary schools, and to what extent schools enforce these rules. Who handles discipline, and how it is handled will be reported by a few of the studies, and various ways in which classroom order is maintained or lost will

also be discussed. In addition, several studies (e.g., GG, HSB), are exploring relationships between order, and student achievement and morale; and between order and the basis of authority in schools.

Context of Schooling

Different contexts of schooling are being studied; however, context is being defined in a variety of ways, so results and discussions will not necessarily be complementary. Several studies are examining the community or parent context of schools, focusing largely on their expectations and evaluations of their local schools, and parental financial resources for their children's further education (e.g., GG, HSB, MM, SS).

Possibilities for breaking down the barrier between schools and the community context are being discussed in three studies (HI, UES, WRISE). The school district organizational context is receiving some attention in most studies, although the amount and focus of that attention is varied. For example, while JL and CVS included interviews with central office administrators as one source of data about the particular schools they studied, MM, PAE and UES are examining in depth the school district as an organizational and political context for individual schools, focusing on the reciprocal influence between individual schools and school programs and the district organization.

The levels of schooling in which the high school is situated are being examined in some detail (CF, SS); and there is some look at the high school in relationship to student employment and students' future careers (CF, HSB, WRISE). In addition, the federal context of public schooling is being examined to find out ways in which federal policies affect local schools (GG, HI). Finally, several studies (especially CF, EV, PAE, TS) are examining the social context of schooling as an institution in contemporary society, exploring how social values and changes in the social structure are influencing schools.

Taken together, these studies will provide many insights into different contexts of schools. However, this optimism needs to be tempered by three caveats. First, as mentioned earlier, most studies that examine the context of schooling tend to focus on one or two dimensions of its context, such as the community or the school district, rather than comprehensively analyzing many dimensions of the context of schools. Second, there is relatively little attention here to the structural context of unequal social relationships in society, and the reciprocal impact of structural inequality and schooling on each other. And third, most studies focus the bulk of their attention on the individual school with its context occupying a secondary position, and some such as HSB pay relatively little attention to its context.

Transitions out of Secondary School

Another topic that is not new, but that is of particular interest today concerns transitions out of high school. Earlier studies documented a strong relationship between a student's family background and his or her occupational path after high school, suggesting that schools have little impact on where students go in later life (e.g., Coleman, 1966; Jencks, 1972). Following on the heels of this research were studies that examined what goes on inside schools, which began to show ways in which schools actively channel students toward different futures based on factors such as family background (e.g., Rist, 1970; Rosenbaum, 1976). Four studies reviewed here will add new data and discussions about transitions to college and work (CF, HSB, CVS, PAE). They will provide information about influences on students' plans, barriers (especially financial barriers) students encounter as they try to achieve their plans, and the differential roles of different private, public alternative, public comprehensive, public vocational schools in preparing students for their futures. Only one of these studies will be longitudinal (HSB), and its data will rely on student responses to questionnaire items. However, this information should broaden our understanding of school-related and nonschool-related factors that influence students as they leave school for various destinations.

Reform Plans

Eight of the sixteen studies reviewed here will offer proposals for reforming secondary schooling. There is quite a bit of overlap in the purposes toward which they will be targeted. All of the reform proposals will be concerned with maximizing cognitive learning for all students. Several are coupling this with other purposes, such as preparing students specifically for college (CF, TCB), preparing students to function in the world of the future (EV, RGE), or preparing students for later work and citizenship roles (CF, EV, PP). Some reform proposals are directed toward developing students' human potential in noncognitive as well as cognitive areas; others are directed almost wholly toward cognitive growth. Six will aim toward building greater social consensus about the purposes, contents and practices of schools (CF, EV, PP, RGE, TCB, TS), and one will recommend providing a range of options in purposes and practices to give different segments of the public a choice over the kind of schooling they prefer (PAE).

What will these proposals recommend be changed? There will be a diversity of recommendations. Most or all will address organizational structures in schools to varying degrees (WRISE focuses heavily on this area), and some will also address organizational structures in school districts (CF, EV, PAE). For the most part, these recommendations will aim toward increasing organizational flexibility, improving communication, widening arenas for decision-making and participation, and supporting curricular or instructional recommendations. Five reform

proposals will center a large portion of their recommendations around the curriculum (CF, EV, PP, RGE, TCB), and most others will at least address the curriculum. These proposals will be responding to a concern that curricula have become too diversified, and that educators have lost sight of a clear definition of what is most worth knowing. At least five will specifically address instructional processes (CF, PP, PAE, TS, WRISE), arguing that the process of instruction in most secondary schools does not make use of what we know about how adolescents learn. As a whole, these eight proposals will offer a range of different ideas from which educators may draw in attempting to reform secondary schooling, and will stimulate discussion about school reform. Perhaps this latter effect will be the greatest result of these reform proposals.

Projections and Suggestions for the Future

While the studies reviewed here make some excellent contributions, as a body they have several shortcomings. First, they strongly represent some perspectives on schooling, while they underrepresent others. In addition, they leave some important questions and some student populations relatively unexamined. The comments that follow are not directed toward shortcomings of any single study, since no single study can do all things. Rather, they are directed towards holes or weaknesses that remain after the studies taken together have been examined. These are areas that should receive attention of those planning and sponsoring research on secondary education during the remainder of the eighties.

Quality of Education and Human Diversity

Quality of education and student diversity are two themes that are addressed in most of the studies reviewed here. All of the reform proposals are trying to upgrade the quality of schooling for all. Most also specifically acknowledge the fact that students differ from one another in a number of ways and that students who are members of some social groups historically have not received a quality education. But, these studies make different assumptions about diversity and about quality education, assumptions that need to be critically evaluated.

Most of the proposed curricula are consensus-oriented. They are founded on a concern that too many students are learning too little in school, and trace this problem to the proliferation of programs and courses in schools over the last two decades. In attempting to upgrade the quality of education and to restore order to schooling, their authors advocate forging consensus about what schools should teach with an eye to identifying and institutionalizing worthwhile areas of knowledge. The studies reviewed here that advocate consensus over the curriculum deal with human diversity in one of two ways.

The first way, represented by PP, is to assume that all people are much more alike than different, and to suggest that, since we all live in the same society, all should be taught the same knowledge and skills. Extreme skill deficiencies may need special remediation, and differences in learning rates should be accommodated, but all students should be required to learn the same curriculum, that curriculum being carefully designed to represent the highest quality of thought and to promote the development of the most valued human traits, skills and talents.

A modified version of this position proceeds on the same assumptions, but argues that there should be a greater amount of variation in what is taught. On what basis should that variation be made? In the past, secondary school curricula were varied largely on the basis of students' probable futures; college-bound students got one kind of education and other students got something different. Several studies today such as EV are questioning the ethics and the practical need of doing this. Differences in local background, interest and learning style are being suggested as more appropriate bases on which to vary the secondary school curriculum (e.g., EV, RGE, TS). This line of thinking argues that all students should be taught a similar curriculum that has been carefully designed to include what is most worth knowing, but that this curriculum should be adapted to local communities and individual students.

There are few voices represented in the studies reviewed here that do not take a consensus-oriented position. But there are some researchers who vigorously reject this orientation, and their voices need to be attended to. These researchers argue that there is no value-free or interest-free consensus. In complex societies, in fact, "consensus" rarely exists. What passes for consensus usually represents the imposition of one group's perspectives on others. Conflict is more normal than consensus, and schools should respect the integrity of different viewpoints, values and experiences rather than imposing consensus. The problem of quality in schooling has less to do with a proliferation of courses and programs than with the quality of teachers, and the narrowness of criteria we use to judge quality. Those subscribing to a conflict orientation differ over the extent to which they see conflicting values and perspectives as rooted in individuals and small groups, or as rooted in larger social groups.

One viewpoint, represented here by PAE, argues that individuals and small groups (e.g., the family, the neighborhood) have a right to define, on the basis of their own values, what to learn and how to learn it. Public school systems should offer the public a choice among a range of alternatives. These alternatives should be of the highest quality, but should not all represent the same version of what counts as quality. Citizens should have a choice over what constitutes a quality education, and roughly what should be included in that education. Having choice among alternative courses, programs and schools allows the individual and his or her family to assume control over

their own education, based on their own sense of what is important and what is not. The absence of choice thwarts the development of one's personhood and one's own sense of life meaning. In giving the public free choice over different kinds of quality education, both diversity and quality are respected.

A second viewpoint argues that quality education and human diversity cannot be considered apart from the structural inequality that characterizes this society. By structural inequality, it is meant that access to the nation's resources (power, prestige and wealth) is unequally distributed on the basis of social group membership, including race, sex, social class, language, religion, and handicap. Differences among people in this society result from a variety of factors, including the positions of groups in the social structure, cultural inheritance, and individual experiences and personal background. This orientation has implications for schooling. First, it suggests that there are two kinds of knowledge: knowledge that has capital because it provides access to social institutions such as college, and knowledge that has intrinsic value. All students need to learn the knowledge that has capital, such as reading; but traditionally it has overrepresented the experiences of white middle class males. In order to make capital knowledge more accessible to all as well as more reflective of a diverse society, it needs to be redefined to include the experiences of more groups. In addition, all people view some knowledge which may not necessarily have capital value as intrinsically worthwhile, on the basis of individual interest of cultural background, and curricula should include it. Second, students need to learn to restructure our institutions to make our society more equitable. Thus, social problems and social activism skills need to be taught, especially to those who are members of oppressed groups. Third, all Americans need to learn to respect and live with diversity; therefore, all curricula should embody pluralism.

This author believes that this latter orientation is the most just because it explicitly addresses quality and equality in the context of those human characteristics we as a nation have had the most difficulty dealing with equitably. Also, by preparing students to bring about social change related to social inequality, this orientation adds a dimension that is missing in most reform proposals. Most essentialist proposals argue that the better educated citizens are (i.e., the better they have been taught the recommended curriculum), the better able they are to improve society. This assumption may be valid, depending on what "improve" means. For example, if "improve" means that technology will continue to be developed and citizens will learn to use it more efficiently, this assumption may be very correct. But, if "improve" means reducing racism, sexism and poverty, it may not be correct at all. Are we to believe that those who possess the greatest share of the nation's wealth, power and status will share their privileges with those who do not just because everyone is "better educated?" Or, doesn't history suggest that the privileged will only become more sophisticated in their attempts to maintain their privileges, and the

qualifications for jobs will escalate while the social distribution of jobs will change little?

In short, let us not rally behind what seem to be prevailing viewpoints without giving serious consideration to others thus far underrepresented in the reform proposals of the 1980's. Rather, before getting caught up in defining what knowledge and skills should comprise a curriculum for all students, we need to listen to those who are critical of social consensus and of the social structure that exists. Researchers and educators who hold alternative philosophical orientations toward education, such as those described here, should be funded and supported in their efforts to articulate alternative aims of schooling at the secondary level.

Group Membership of Study Directors

A second way in which the viewpoints represented in these studies have been limited concerns the group membership of those directing the studies. The great majority of the studies were directed by whites. Of the sixteen, two were directed by blacks and one was co-directed by a black. None was directed by a Hispanic, Asian or Native American. Although some studies included nonwhites in secondary roles (e.g., on advisory panels or as staff members) it appears most that whites still have the major responsibility for conceptualizing the problems to be studied and for drawing conclusions and interpretations. When we consider the fact that most of the studies are examining student populations of all colors, and addressing their discussions toward all of American's students, this underrepresentation of nonwhites becomes even more of a concern. Historically, interpretations of nonwhites in studies of schools that were directed by whites have often been racially biased. For example, it is unlikely that many nonwhites would have advanced theories revolving around genetic deficiency or cultural deprivation, based on studies of themselves. It is unclear at this point how racial bias will be manifest in current studies of secondary education, but it may well be evident, for example, in failures to recommend that curricula draw from the experiences of all racial groups rather than mainly the Anglo-American experience, or in the relegation of attention to nonwhites to "ethnic studies" or "cross-cultural understanding" topics, which tend to encourage educators to leave the rest of the curriculum as is in terms of its Anglo bias.

Women were not as underrepresented as nonwhites: about one third of the positions of leadership in the studies reviewed were occupied by women. This active role for women needs continued support.

An additional group membership difference that is often not questioned today concerns the direction of studies by researchers who represent universities, professional organizations or research institutions. While practitioners (teachers, school administrators, central office administrators) were included in advisory positions in some

studies reviewed here, members of these groups did not direct any of the studies. A century ago, this fact would have discredited results and conclusions of studies in the eyes of many practitioners (see Krug, 1964); we cannot be certain that much of the same sort of credibility problem does not exist today. We may speculate that the curricula that result from projects such as ASCD and PAE, developed and tried out by practitioners, will be viewed with more interest by those in the public schools than proposals which may be of excellent quality but had their birth in universities or research institutions. While we may be accustomed to thinking that only professional researchers have the training to direct research, it is difficult for this writer to believe that there are no superintendents or curriculum coordinators, for example, practicing in schools and school districts, who are unable to conceptualize and direct studies and reform proposals.

Development as an Aim of Secondary Education

Several studies address development as an aim of education (CF, GG, JL, PP, TS). These studies take a somewhat eclectic approach to defining "development," drawing from several quite different definitions. To some, development essentially means growing through a pattern of changes observed in the typical life cycle. To others, it means learning to perform certain skills, or growing to become a certain kind of person who will fit into a specific kind of society. To still others, it means growing through sequential stages that do not necessarily correspond with chronological age, toward a biologically or psychologically (rather than socially) determined end. Finally, some educators use "development" as an alternative metaphor for growth or learning, and do not define it at all beyond that. If development is an aim of education in studies reviewed here, what does that mean?

CF and TS are conducting literature reviews on various conceptions of adolescent development for the purpose of suggesting practical ways in which research findings can be and are being incorporated into secondary schooling. JL has elsewhere published a literature review on early adolescent development (Lipsitz, 1977). She describes early adolescent development as a natural stage in the life cycle that is shaped by both biological and cultural determinants; during this stage the individual must confront several tasks, including the establishment of a separate identity that has its own continuity, integration of self with one's own generation, and formation of a set of personal values. Cognitive and biological changes transform the individual during this stage, but growth spurts vary widely among individuals. Her study (JL) discusses ways in which four middle schools facilitate development so defined. It appears that GG is not forwarding any particular definition of development, but implicitly assumes that moral or character development occurs when one is instilled with a set of moral standards at an early age, and is later given the freedom to choose those or some other set of standards. Finally, PP views development as growth and

learning, and sees some skills and knowledge as fundamental to lifelong development.

There is also disagreement about what aspects of a person schools should be concerned with developing. Two studies (GG, TS) maintain that schools should develop the intellect and the personal character, with TS focusing more on intellectual development and GG on character development. PP advocates developing a range of human potentials, and focuses mainly on cognitive development. JL advocates schools fostering the development of the whole person, including social, cognitive, and emotional dimensions, and at this point CF has not taken a definite position what should be developed in school.

Thus, while there is some interest in development as an aim of education, there is no clear agreement about what "development" means, or about what human dimensions schools should develop. In thinking through what "development" means, we need to be very clear about the extent to which we see development as socially determined, and the extent to which we see it as biologically and psychologically determined. Seeing development as socially determined assumes that society defines certain skills, attitudes and knowledge people need, and that one "develops" as one learns those skills, attitudes and knowledge. For example, if a society values a certain set of personal traits more than other traits, a child who had acquired those traits might be seen as better developed than a child who had not. On the other hand, if development is defined as biologically and psychologically determined, the sequence and end of development would be much the same for all people, regardless of their society. This is perhaps a more difficult definition to examine empirically, since the yardstick we use to define a developed person is still a product of human social thought rather than natural decree. For example, when we define advanced intellectual development, our definitions are partially shaped by our own values; labels do not spring forth from the heads of intellectually developed persons, proclaiming these persons to have reached the highest stage of intellectual development. Thus, what is meant by development needs to be clearly articulated, including the extent to which development (or our definitions of it) is socially determined, and the extent to which it is biologically or psychologically determined.

Off-campus Sites for Formal Education

Many of the studies included in this review tend to take for granted that the school building is the main place where adolescents should receive their formal education. While there is some attention to off-campus sites for schooling (e.g., EV, HI, PAE, UES, WRISE) by and large reform plans tend to focus more on reforming what goes on inside the school building, than on conceptualizing formal education as it could occur in a variety of sites.

Recent research suggests that experience in "real world" settings dealing with real problems, combined with reflection in a school-type setting is most conducive to growth (e.g., Hedin, 1979). Why the "real world"? Several features distinguish it from classrooms. First, real problems tend to be taken more seriously by students than hypothetical problems commonly used in classrooms. Second, resources outside the school are more varied and often more realistic than those that can be brought into classrooms. For example, a wilderness area includes many more plants, animals and insects in their natural habitats that demonstrate a natural ecological system, than an artificial system that can be brought into a classroom. In addition, outside the classroom students can learn to interact with a variety of people, while in it they interact largely with their own age-mates. Third, in "real world" settings, students can assume responsibilities and roles that may be difficult to engineer in a classroom, but that can provide a richer learning opportunity. For example, working as a helper in a nursing home can stimulate thought, compassion, and independent action that classroom assignments only minimally stimulate. Furthermore, in this role a student could learn to systematically examine and analyze human behavior or the human aging process, rather than reading about it without experiencing how conclusions in books were reached. Fourth, people in the community can benefit from student action outside the school. For example, elderly residents of the nursing home would likely benefit as much as the students by having young people around to share their thoughts and feelings with.

Perhaps this tendency to focus on formal education in the school reflects an acceptance of the "reality" that education programs based outside the school are often not considered real options at the local level, and when tried, as HI showed, run into some very real problems. Given the current era of financial retrenchment, it may seem more practical to concentrate on using as well as we can what we already have, rather than dreaming up new contexts for education. But, future research should not assume that the school is the only possible context simply because it already exists. We need to explore and implement alternative sites for formal education, and examine ways in which they can enrich the process of schooling. Out-of-school sites, when they were tried and discarded, may have failed because we were not used to making them work, not because they are inherently impractical.

A related area for thinking concerns the fact that the large numbers of high school students (slightly more than 50%) have part-time jobs (Lewin-Epstein, 1981). What are these students learning on the jobs, and how does this relate to school learning? Can schools build on students' employment experiences, or do the two tend to conflict in purposes and processes? HSB has established the extent and nature of youth employment, and it will be discussed to some extent by CF, TS, and WRISE. But otherwise, work-related contexts for learning seem to be overlooked.

Neglected Student Populations and Questions Involving Students

Students are the main clients in schooling. Yet, students are often not the focus of research on schooling. While the studies reviewed here have not overlooked students, they show a tendency to overlook two groups of students--early adolescents and special education students. In addition, they tend to focus on different sets of student-related variables, leaving some important questions about students inadequately examined.

In 1977, Joan Lipsitz wrote a book entitled *Growing up Forgotten*, which discussed researchers' neglect of early adolescents. Researchers have tended to focus on the elementary or the high school years, neglecting the junior high or middle school years of schooling. This may result from confusion over whether early adolescents are elementary or secondary school students. Not having a clear home in either level, they have floated in between, forgotten. Looking over the studies reviewed here, it seems that this age group still tends to be forgotten. Attention is given to early adolescents in three studies only: JL, MM, and SS. All others have directed their attention toward the high school. Assuming that the research reviewed here is representative of that being done in the nation at large during the early 1980's, we can conclude that we will know and be thinking much more about what goes on or should go on in high schools than in middle or junior high schools. Two recommendations for the future should strengthen attention to this age group. First, researchers whose interest centers around the high school should channel some energy toward understanding and thinking about where high school students come from. Second, those whose primary interest lies with this age level should join together as an advocate group for securing support for and building interest in attention directed specifically toward early adolescents.

Another group that appears to have been forgotten are students with special needs. While student populations were consistently stratified and discussed in terms of race, sex, social class, urban/suburban/rural location, and in some cases ability, neither in descriptions of subjects for study, nor in discussions of the general content of forthcoming reform proposals in thirteen of these sixteen studies were special education students specifically mentioned. (They were mentioned in two studies, one in a positive sense and one in a negative sense. UES looked at and discussed effective mainstreaming programs in secondary schools; and PP specified that its reform proposal was for all but the "feeble minded.") It is too easy, unfortunately, for "regular" educators to forget that secondary schools are populated in part by students who have extra difficulties with reading, who have severe emotional problems, who lack the ability for much academic learning or who have exceptionally high abilities, and students with other physical, sensory and mental difficulties. Too often, it is assumed that special educators will "take care" of these students, so they usually get left out of mainstream discussions of schooling. Reform proposals in the future should explicitly take into

account the varied talents, capabilities, strengths, weaknesses and learning styles of all students including those who are most extreme.

In addition to neglecting early adolescents and special education students, these studies are uncoordinated in the student-related variables they examined. Earlier, it was pointed out that TV watching and student goals constitute the two student-related variables most commonly examined in these studies. A number of additional variables are being examined in two to three studies each: students' feelings about being in school, what students do in their leisure time, students' views on race, their general character, their self-concept, and their perceptions of specific peer characteristics. There are several additional variables that related directly to improving the secondary school and that could bear more intense and coordinated study.

First, how do students go about setting their own goals and how do they learn how to prepare themselves to attain their goals? There is a tendency to take students' articulated goals and aspirations at face value, rather than wondering how and why they arrived at those goals and what alternatives they considered and rejected. There is also a tendency to assume students will know what they should be doing to reach their goals (e.g., how to prepare for college) when it may be that they are most knowledgeable about how to achieve only certain kinds of futures, such as the occupational and educational status of their parents. Qualitative longitudinal studies of students, their goals and their goal-related activities could be particularly insightful.

A second area concerns student core values. There is a tendency to despair over the superficial, hedonistic or selfish values the young today are believed to develop, rather than looking for the positive in their beliefs and values. What do students today believe and value that schools can build upon? Student cultures may house values that adults would want to see cultivated if those values were recognized and attended to. For example, students in a desegregated school were found to have very positive attitudes about racial differences and racial mixing; but their teachers were so busy concentrating on their low average scores in basic skills, that they failed to see these students as potential future leaders in reforming this society's race relations (Grant, Sleeter, and Boyle, 1982).

The Curriculum: What Actually Gets Taught

Part of what secondary schools today are criticized for is what they teach. We are told, for example, that curricula have been fragmented, and that tough courses have been replaced with soft alternatives. How do we know this and what does it mean? At first glance, it would appear that several of the studies included here will inform us what schools actually teach, so that we will be able to see the extent to which content is fragmented, tough, or soft. For example, SS states

attention in several of the studies, as noted earlier. Taken together, these studies will offer a fairly comprehensive picture of secondary school principals--what they do and how they see their work--and of how secondary school teachers actually teach, and how they see their students and their work. We will have a less comprehensive picture of several other important staff-related variables.

First, although principals are being studied in detail, administrative teams in schools (administrative assistants, vice principals) do not appear to be. This may give us a distorted picture of the power and influence of the principals, particularly in large schools that are led by administrative teams. Second, a number of teacher-related variables that are being examined in only one or two studies each may be worth further study. Specifically, the personal backgrounds and professional development of secondary teachers are being examined in two studies (CF, SS), and the political beliefs of teachers and administrators in one (SS). Future research could examine questions such as: What kinds of people in the last few years have been entering teaching and administration at the junior and senior high levels? What backgrounds do they represent and what biases are they bringing into the classroom? Given the entry of women and nonwhites into a greater variety of occupations, and the publicized militancy of the teaching profession, studies a few years ago may no longer adequately answer these questions for today. The staff culture in schools is being examined in at least one study (MM), illuminating how teachers interact on a daily basis in such a way that particular norms and practices are supported. Are staff cultures similar in most secondary schools? Do the staff cultures in public schools differ from those in private schools? How do staff cultures facilitate or impede reform efforts? Such questions would be productive topics for further research on secondary schooling.

Qualitative and Quantitative Research Methodologies

Only two of the studies reviewed here (HSB, SS) are using quantitative research almost exclusively. The rest are using either a mixture of qualitative and quantitative research, or almost exclusively qualitative research. Why are most using qualitative research, and how appropriately are they using it?

One would use quantitative research because it makes possible precise analyses of data on specific variables and relationships among variables, analyses involving large sample sizes, and it can permit generalization from a sample to a larger population. In order to accomplish these purposes, the independent and dependent variables believed most relevant for study are specified before conducting the study so that quantifiable data can be collected in a uniform fashion across research sites. But, since findings of quantitative research on schooling have often been inconclusive, its usefulness has been questioned on several grounds. First, many believe that we do not know

well enough which variables are most important and how to operationally define all of them before entering the research site. Second, we cannot be sure that all respondents take seriously impersonal questionnaires and tests. Third, by aggregating data, quantitative studies often average out important within-group differences that may be very important to the study. And fourth, questionnaires and tests do not capture subtle nuances of meaning and mood.

Qualitative research methods can offer an appealing alternative to all four of these difficulties, which may account for its current popularity. But not all approaches to qualitative research are useful for the same purpose. For example, a long-term intense study in which a variety of methods are used is well suited to identifying a complexity of variables, possible relationships among variables, diverse meanings and sentiments of respondents, and subtle patterns that may be very important to understanding unique situations. On the other hand, short-term (i.e., a few days to a few weeks) studies tend to be best suited for generating research questions, collecting interview and observation data about specific variables, and forming subjective impressions about schools.

Since qualitative research has been used much less in the past than quantitative research, the preponderance of qualitative studies here probably reflects a genuine interest in addressing purposes suited to qualitative methods more than it reflects a rejection of the value of quantitative research methods. But, there appears to have been a strong tendency to opt for short-term field studies in lieu of intense, long-term studies. This leads one to wonder to what extent short-term rather than long-term approaches end up being used because they are less expensive than long-term, intense studies. Shorter studies are indeed cheaper, but not necessarily more cost-effective. For example, the information produced by TS and CF can enrich and illustrate themes and questions the studies laid out in advance, and can suggest questions for future research; but these field studies are not intense enough to permit unexpected hypotheses or variables to be identified and explored in depth.

What about quantitative research? Is there a place for it in research on secondary education? This writer believes that there is. But quantitative researchers need to be aware that they have a moral obligation which is sometimes transgressed. Since the American public tends to reverse "hard science," research findings based on it tend to be believed and taken at face value. This means the researcher needs to be very careful not to suggest findings based on questionable logic, questionable application of statistical procedures, or on variables of questionable validity. For example, the hypothetical statistical experiment performed in *Public and Private Schools* (HSB) that "found" that financial assistance to private schools would benefit lower class and minority students more than it would benefit middle white class students has been criticized as being based on faulty logic (e.g., McPartland, 1981). Yet, because it was based on data from a large

study performed by qualified scientists, it could well influence real policy decisions.

In short, we have at our disposal a variety of research methods, each best suited to certain kinds of purposes, and each with its limitations. Some methods are more expensive than others; some seem to be enjoying more popularity today than others. When designing or deciding whether to fund a study, neither expense nor popularity should be of primary concern. What should be of concern is the worth of the purpose, the appropriateness of the method to the purpose, the responsibility with which the method will be used, and the likely uses to which the results might be put.

Conclusion

During the first part of the eighties, money for educational research has been spent in such a way that we will learn more about several specific kinds of things. We will learn about different role groups' perceptions of school goals, climates in different secondary schools, order and discipline, decision-making and authority in schools, secondary school principals, teacher perceptions of their work and of students, teaching strategies and use of classroom time, student TV watching, student goals, student participation in extracurricular activities, and transitions out of secondary school. Ways in which secondary schools differ will be highlighted and public and private schools will be compared. We will learn about programs in a number of secondary schools that are considered to be effective (especially urban schools), and about criteria these schools use to define their effectiveness. We will also begin to learn more about different contexts of schooling. In addition, we will have several proposals for school reform to consider.

Where should attention and funding go during the remainder of the decade? An equitable part of it should go to studies directed by nonwhites and practitioners, and should continue to go to studies directed by women. In addition, some of it should go to research directors who hold philosophical orientations toward human diversity and schooling that diverge from the points of view represented in the majority of the reform proposals that will be produced by studies reviewed her. Ignoring or failing to understand the relationship between schooling and the social structure can lead to attempts to reform schools based on faulty assumptions about how schools operate, or tacit acceptance of social relationships many Americans are attempting to change.

There should be studies of early adolescents, studies that specifically include special education students as part of the general population of secondary students, and more in-depth attention to the goals and values of secondary school students. The content of the secondary school curriculum should be investigated--not just what courses are taught, but what actually gets taught in those courses.

as a rationale for their study that "improving schools requires knowing what is happening in and around them" (Goodlad, Sirotnik and Overman, 1979); and CF's proposal states that "we will focus on education, on teachers, students, the classroom, and curriculum" (p. 14). However, closer inspection reveals that the studies reviewed here will tell us little about what schools actually teach.

One method being used to assess the content of the curriculum is the examination of course titles (e.g., CF, HSB, SS). But what does a course title actually tell? For example, what is included in the content of "Sophomore English"? We can take guesses, but without having observed the sophomore English classes, we really do not know.

In several studies, observations are being made in classrooms. But, unless available proposals and protocols for these studies are misleading, their attention will center around processes more than content of learning. For example, SS is carefully documenting teaching strategies, grouping patterns and interaction patterns in classrooms--but the content of teaching and interaction is not documented at all. CF is focusing on teaching strategies, teacher-student relationships and evaluation processes in classrooms--but the main attention given to what is taught is through examining course titles and materials, rather than through documenting "curriculum-in-use" in classrooms. Alas, we still may not know what gets taught in Sophomore English. Does it make sense, then, to proclaim curricula as incoherent, or to maintain that "gut" courses have been replaced by "fluffy" ones, if we do not know what is actually being taught in any of those courses?

After we know what gets taught, then we can debate its merit. And debate it we should, but our debates need to make explicit what makes some knowledge more worthwhile than other knowledge. For example, if geometry is deemed more worthwhile than driver's education, what makes it so? Is physics more important than physical education, or can good arguments be advanced for valuing knowledge of physical education more highly than physics? In short, we need to know what schools actually teach (and the studies reviewed here may do little to advance our knowledge of this), and we need to define explicitly and debate openly what makes some knowledge more worthwhile than other knowledge.

A slightly different aspect of the curriculum that will still need more attention is extracurricular activities. Several studies will be reporting which students participate in which activities (e.g., CF, HSB), but it appears that we will know little about what goes on in these various activities. If extracurricular activities are going to enter into our debates on schooling, we need to know more about what students do and learn in them.

Staffs in Secondary Schools

Teachers and principals in secondary schools are a focus of

More attention should also go to formal education outside the school buildings, since alternative sites for learning have potential we probably have not learned to use adequately. In addition, secondary school staffs today need more study, including attention to administrators other than the principals, the backgrounds, biases and beliefs of those entering teaching and administration today, and staff cultures in secondary schools. Finally, a careful look should be taken at the purposes for and approaches to qualitative studies before they are funded--if intense and long-term study is what is really needed, it should be funded; short qualitative studies that do not serve a useful purpose should not be.

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INTERPRETIVE SUMMARY OF THE CONFERENCE

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I cannot offer a comprehensive account of the manuscripts and conference dialogue. Rather than restrict my observations to contributions of persons assigned to the four main topics, I have tried to synthesize material from all presentations, reactions, group discussions, and written reports. I have attempted to integrate many strands, but this commentary should be viewed as only a personal report of what one participant learned.*

1. *Development as the Aim of Education*

All papers, reactions and discussions confronted the problem: what criteria for human development ought to serve as educational aims? Many dimensions of growth were considered: concrete to abstract thought, preconventional to post-conventional moral reasoning, ego development from impulsive to conscientious, and enhancing such qualities as identity, relatedness, autonomy, and the increasing ability of a person to understand and act upon the environment. The group reporting on this topic presented twenty-one facets of development as educational aims, under the categories of relationship to self, to others, and to ideas. Participants disagreed on the significance of specific criteria (e.g., see Hogan's critique of the concrete-abstract distinction or Metz's critique of the focus on the individual), but the multitude of conceptions, far from being viewed as a chaotic disarray in need of more consensus, often was considered a strength.

Frequently we were advised not to worship at the altar of any one conception of development. Holding too narrow a view of development can result in elitist ideology that in effect denies dignity to large groups

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of people who may not conform to the dominant paradigm. For example, defining development solely in terms of the abstract verbal skills necessary for college admission or, as Gilligan writes, only in terms of a morality of rights (as opposed to one of care) can unjustifiably brand many students as poorly developed. To resist a narrow conception, to search for a multi-dimensional aim is critical, but in doing so, we must confront some issues that were not sufficiently considered during the conference.

First there is the problem of defining development so broadly that it encompasses any change in an individual that might be considered positive. If development is synonymous with growth in the full range of human competencies and sensibilities, it loses distinctive meaning, becoming an unnecessary concept. We may desire students to learn such things as the rules of punctuation, how to change a tire, the importance of the *Constitution*, ways of expressing sympathy to others, the necessity of coming to work on time, but each of these reasonable educational aims might be accomplished without affecting the development of a student, if we are mindful of the way development has been most useful in psychological literature from Dewey to the present.

If the idea of development is to be helpful it should refer only to those changes in people that represent increased capacities to perceive relationships among multiple phenomena, to function successfully in novel situations, to become bonded or committed simultaneously to different levels of social organization, to integrate mind and body in complex ways. In short, development represents the integration of experience into increasingly complex patterns which themselves enhance possibilities for further integration. A definition of development must be broad enough to include the many dimensions of experience in which this can occur (e.g., logical thought, interpersonal sensitivity, physical activity), but specific enough to permit differentiation between developmental and nondevelopmental goals.

Distinguishing between developmental and nondevelopmental goals can be difficult. Teaching students to reason about the social consequences of personal action, to explain the implications of the first law of thermodynamics, to play soccer, or to draw a floor plan may all require high (and indistinguishable) degrees of integration, making it difficult to select some goals as the most, others as the least, developmental. Furthermore, the significance of the challenges required by any given goal depends in part on a student's unique personal history. Consider the objective, "learning to come to work on time." One student may have to learn to tell time, to perceive the relationship between mapped bus routes and his destination in the real world, to anticipate how long it takes to complete personal chores and walk to the bus stop, to calculate how much to spend on lunch so he can afford the fare. Another student may have so much experience traveling to work that the objective has been mastered to the point of routine, presenting no further opportunities for integration. For one student, the learning of complicated material in nuclear physics may be less challenging than learning how to dance or

how to relate to people in a different culture. Another student may have mastered impressive skills in social interaction and leadership, with no apparent growth in mathematical development. Thus, generalizations which might be made about many adolescents (e.g., getting to work on time should be "easy," or taking responsibility for student governance "difficult,") must often be qualified.

Such problems do not invalidate the need to distinguish between developmental and nondevelopmental goals. It may be difficult to differentiate among *some* goals, but sound distinctions can be made between large classes. All of the goals mentioned above would usually require more integration of complex experience than such goals as teaching students the rules of the school, teaching the symbols of the periodic table, or increasing aerobic conditioning. "Nondevelopmental" aims may have a legitimate place in schooling, even as a means or tools for developmental processes, but to the extent that these become ends of instruction, they fail to signify development. The distinction remains useful in reminding us not to allow preoccupation with the "basics" to displace classroom activities calling for direct integration of complex experience.

As we embrace a multi-dimensional, broad concept of development that retains a distinctive emphasis upon integration and reorganization of multiple aspects of experience, we must select more specific criteria for assessing the degree to which development is evident. Some criteria that have been proposed raise the possibility that developmental theories themselves reflect bias based on race, sex or social class, a concern evident in several conference papers and discussions. Research has shown that some qualities (or at least the tasks administered to measure them) are more frequently fulfilled in some groups than others (e.g., males vs. females, blacks vs. whites, lower vs. upper socioeconomic status). While evidence on group differences can be challenged in a number of ways, we must take seriously the possibility that important differences do exist on some dimensions; for example, women frequently scoring lower than men on Kolhberg's scale of moral development or Piaget's scale of abstract thought, but women scoring higher than men on a dimension of moral thought discussed by Gilligan as caring or human relatedness. Depending upon the dimension chosen (e.g., moral reasoning, physical coordination, ego identity) or upon different constructs *within* such dimensions, we might find different rates of growth among sexes, races, nationalities, social classes. Conference participants frequently stressed the dangers of developmental imperialism and elitism, insisting that dimensions of development in which dominant groups seem to excel should not be used as exclusive criteria for judging the development of all people. How should the existence of diversity among groups on developmental criteria be regarded?

One alternative is simply to endorse the dominant characteristics of each group as defining its special developmental mission. One would deliberately try to avoid imposing developmental standards ascendant in other groups, for example, by enhancing women's interpersonal orientation to issues without trying to stimulate their concern for individual

rights as abstract principles. This approach rather than searching for criteria that might be applied to all people, emphasizes unique ways in which different groups integrate experience, and then attempts to reinforce those group-based qualities. It appropriately resists imposing outside ideologies of development which themselves can deny people a sense of dignity, but it runs the risk of imposing its own parochial standards that can become self-fulfilling prophecies and can within groups, still discriminate between the highly and lowly developed people. Furthermore, from a societal or world perspective, it can lead to cultural and educational relativism which makes common educational policy across groups almost impossible. For these reasons, group differences must be honored, but should not be reified into exclusive standards for development for group members.

Another approach to group differences is to try to incorporate them into a scheme applied universally to people in all groups. Theoretically this can be done without imperialistic imposition of a dominant group's main dimensions, providing the scheme is guided by the following assumptions: 1) Different cultures, subcultures and other human groupings perceive, feel and behave in the world according to different dimensions or ladders of development, but all have in common the integration of experience with increasing complexity. 2) All humans have within them some potential for growth along all the dimensions that may be discovered. 3) All dimensions of development should be respected as worthy of pursuit by all humans, unless it can be shown that this violates human dignity (e.g., when persons engage in complex forms of reasoning and social organization in order to exploit or to do violence to others). Applied to Gilligan's work, these assumptions suggest that a sense of both interpersonal connectedness and transcendent individual rights may be necessary for a highly developed sense of morality. Any given woman or man may reflect high or low development on either criterion, but ideally one would aim toward a high manifestation of both.

This approach leaves several problems unresolved, for, assuming a large set of legitimate developmental dimensions, it gives no guidance on which ones to cultivate. Scarcity of time and resources demand that some dimensions be selected over others--not all can be pursued. With each individual differing in his/her capacities on specific dimensions, should we aim toward depth and cultivate areas of greatest talent, or breadth to enhance diversity within the individual? Special problems will also be posed when some dimensions seem to conflict with one another (e.g., right brain vs. left brain functions). In a given cultural setting, certain dimensions will be more adaptive than others, in the sense of being more highly rewarded and considered necessary for normal functioning in the society (e.g., the emphasis on abstract verbal skills in modern culture vs. physical skills in traditional culture). Individuals whose personality, temperament, or abilities fail to conform to dominant forms (e.g., persons in capitalist cultures who resist developing the assertiveness and independence required to rise to the top in modern institutions) may experience stress, dissonance, alienation. Whether to promote only the most culturally dominant forms of development,

at the price of generating personal stress, calls for further value judgments in selecting developmental aims. Finally, some aspects of development may not be susceptible to planned professional intervention; others may be influenced, but would occur for most people without intervention, as an inevitable part of maturation. To use resources prudently, we should restrict intervention to those dimensions where growth is both possible through intervention and unlikely to occur without it. Unfortunately, research has not informed us very conclusively as to which domains of development are eligible under these standards.

These problems in applying our conception of development illustrate significant issues in moving from "is" (describing the course of development) to "ought" (prescribing developmental criteria as aims of education), and in coping with imperfect conditions of social life. Disputes over selection and priorities among different dimensions of development will have to be settled on criteria somewhat external to developmental theories themselves, because the theories usually address neither the prescriptive philosophical issues nor the imperfect conditions of social life such as scarcity of resources. The necessity of some level of adaptation to dominant community norms, the political-economic power of specific constituencies, the unique histories of individuals, schools and communities, and controversial philosophic frameworks are all likely to influence debate. One conference group suggested that rather than enter the thicket of argument as to how to promote development, educators should take the position that schools avoid *inhibiting* development. Even this position, however, requires a sense of priorities; we must decide which dimensions can be inhibited more than others. Dulit's response began to address this question by arguing that development of particular qualities of the mind should serve as the highest priority for all students. He recognized the possible interpretation of this as an elitist position, but at least confronted the issue of priorities head on.

2. *School in Relation to other Environments for Development*

Just as each of the four topics required consideration of the definition of development itself, so did they each beckon for articulation of the kinds of environments which promote development. All groups commented upon criteria that would reflect an environment's potential for influencing development. Even without conference agreement on educational aims, the papers and discussions reflected widespread belief that development is most likely to occur in environments that provide the following:

a. Variety. Persons need contact with people different from themselves (e.g., in age, sex, cultural background, values) and novel experiences. Dealing with diverse people and unfamiliar experiences can make demands on the individual to accommodate and to assimilate beyond previous states of cognition, affect, and behavior.

b. Excellence. Persons need contact with models of excellence that illustrate constructive forms of integration at high levels of

complexity. Whether one is involved in the writing of poetry, the composition of music, the conduct of scientific experiments, ethical reasoning, engineering design, or planning strategies in basketball, development is more likely to proceed when students have contact with persons who have reached higher levels than they.

c. Challenge. To promote development an environment must call forth active effort by the individual: physical, mental, emotional exertion, rather than passive absorbtion of stimuli. Striving for models of excellence and coping with conflict often provoke such activity. The challenge must be perceived as relevant or meaningful to the person involved. If one is required to engage in activities that are totally unfamiliar, or are perceived to have low value and status, one is unlikely to internalize the fruits of whatever effort may have been exerted. Finally, one must perceive reasonable possibilities of success, but also some risk of failure; absolute certainty of success will reduce personal investment and inhibit internalization of developmental benefits.

d. Responsibility. Two main ideas are implied by the consistent emphasis from research on experiential education in which students are placed in responsible roles. First, student activities should have real impact on people's lives. Outward Bound programs dramatize the physical consequences of one's actions. Experiences in caring highlight effects on the health, psychological well-being, or the education of persons. Activities at work can affect other peoples' housing conditions, food, transportation, or recreational opportunities. Second, students should function in a sufficiently autonomous role, or have the opportunity to excerise sufficient judgment, so that effects of their actions can reasonably be attributed to the students themselves, rather than to predetermined bureaucratic procedures or simply following orders from a superior. Ideally, environments will confront students with continuously expanding circles of responsibility--from self, to interpersonal relations, to collective aggregates such as religious groups, municipalities, the human species.

There may be other ways of summarizing criteria for developmentally productive environments, but these seem to represent most of the ideas mentioned in Hamilton's paper, various reactions and group discussions. The criteria should not be seen as necessary and sufficient conditions for development. Their use may be qualified by examination of the situations in which they are applied. A racially and culturally diverse school offers more opportunity for development than a homogenous one, all else being equal. However, a particular culturally diverse school may be so torn with conflict that its students and staff cannot learn academic material. A racially and culturally homogenous school that offered opportunities for excellence and challenge might promote more development. Within a given school, an impressive faculty in academic subjects may offer developmental challenges to those students whose families value that sort of work, but students from families where creative manual and physical work has the highest status may find few opportunities to encounter meaningful challenge.

We hoped that the conference would clarify similarities and differences among family, school, peer group, and workplace environments, or at least propose research that might advance knowledge on this question. Hamilton attacked the problem by suggesting that school offered a unique contribution in its teaching of formal knowledge, its socialization to bureaucracy, its transmission of common culture, and its coalescence of peer group life. I found in much of the conversation, however, a conspicuous lack of attention to the social-psychological properties of other environments. One reason for this may have been a belief by many participants (supported by other commentators on socialization in America) that nonschool environments are remarkably similar--in their failure to provide developmentally rewarding experience for most students most of the time. If we are struck by the paucity of developmental conditions in schools, families, peer groups, and workplaces, then it makes little sense to make fine distinctions about their relative potential, or to propose research on that question. Instead, the task of recommending that such environments provide certain experiences would seem more urgent, and this is the sort of discussion that ensued.

It is unlikely that any single environment would meet all of the criteria proposed--variety, excellence, challenge, and responsibility. The point is not necessarily to build a single ideal developmental environment, but to enable adolescents to become engaged in environments that represent these qualities. At school they may have some opportunity to encounter excellence, but little opportunity for responsibility. For some students, the family provides critical opportunities to exercise responsibility, but little variety and only low levels of challenge. The national emphasis on career education, with widespread effort to increase students' involvement in work invites careful analysis of work settings. Hamilton cites research documenting the low developmental potential of most jobs, but other conference participants reported substantial testimony by adolescents that work is more meaningful to them than school.

Discussion of the relative developmental power of different environments raised the issue of the extent of the school's responsibility for the total development of the student. Some would limit the school's task to literacy (language and numbers) and mastery of knowledge and skills required for employment and conventional citizenship. Some would extend schooling to include a broader concern for excellence of the mind, but would stop short of development in interpersonal relations or social responsibility. Those who advocate limiting the school's responsibility point to the school's feeble influence in many areas; they raise moral reservations dealing with privacy or cultural imperialism, or they warn of the enormous conceptual and managerial problems in taking broad responsibility for person's growth. Nevertheless, even advocates of limits face the difficult problem of where to draw the line. Those who construe the school's role in the broadest possible terms face somewhat different problems. Recognizing practical limitations as well as the possible ethical dangers of school acting as a total institution for students' development, they need to decide how to balance two general courses of action: building experiences that maximize developmental

potential within the school, or using the school as a broker to place students in diverse institutions that represent qualities the school may have trouble creating.

3. *Organizational Features of School*

Students seem to be affected in significant ways not only by the explicit aims and content of instructional and extracurricular activities, but also by structures in which they occur. Apparently, organizational processes lead people to adopt a passive or assertive role, to attribute success or failure to self or to system, to view conflict as constructive or destructive, to value white collar over blue collar work. While such claims have become commonplace in the literature, neither empirical work nor analytic writing has assessed the effects of specific organizational features on particular forms of adolescent development. This is probably because our preoccupation with obvious, glaring problems (staff competence, student discipline, curriculum content, low achievement) and conventional professional solutions (in-service training, vigorous enforcement of rules, revising standard curriculum to update it) deflects attention from the subtleties that developmental aims and organizational dynamics introduce.

In exploring this new territory the conference relied largely on logical analysis and synthesis of literature on schools as organizations. This involved the challenge that all topics shared--selecting categories or criteria for development--as well as a new problem: deciding what particular organizational features ought to be examined. Although Mergendoller emphasized issues such as school size, student role, and social organization of the classroom, problems such as local context, equity of access, and grouping practices also received much attention.

As Metz pointed out in her discussion of Mergendoller's paper, any given organizationl characteristic may have different effects in different schools, depending upon context. Small size may facilitate warmer, more trusting relationships, more opportunities for active participation in a variety of the school's activities. But small schools can also be run in ways that deny students active participation, that breed hostility and distrust among community members. Similarly, schools with homogeneous or heterogeneous grouping, with loose versus tight coordination among teachers, with departmentalized or interdisciplinary teaching teams, may have harmful or beneficial effects, depending upon context.

Does the significance of specific contexts preclude generalizations about the effect of particular organizational features? I think not. We can make assumptions about optimal conditions on some variables and then ask, what organizational features would be desired? In considering school size, for example, assume a staff committed to developmental aims as defined here, and a school with a reasonably diverse student body in terms of race and socioeconomic status. Under such conditions, would we prefer a small (500-1000) or a large (1500-4000) secondary school? Knowledge about communication, bonding, and participation suggests that a

small school has more potential for enhancing development. The most likely reason for favoring a large school would focus on career choice: a small school might not offer enough variety in coursework and vocational specialties to appeal to all the interests and career goals of its students. We may quarrel about the relative importance to development of the opportunity to pursue specific interests and careers in a large impersonal setting versus the opportunity for a more general, common education in a small, personally responsive setting, but this becomes an issue in the definition of developmental priorities, not a problem in assessing effects of organizational features. The large school can provide a wider variety of career specialties, but the small school offers a greater proportion of its students the opportunity to integrate diverse experiences among members of the school. Similar reasoning, holding certain optimal variables constant, can be applied to organizational features such as governance structure, methods of grouping students, relations of accountability with the school.

Participants' concerns for equity guided much discussion on organizational features, often, however, without drawing a clear connection between these concerns and developmental aims. In calling attention to ways in which high quality service or fair treatment is denied to minority, low-income, handicapped, or gifted students, participants cited inappropriate labeling and tracking, lack of relevant curriculum, insensitive counseling, lack of opportunity for input into school policy. These matters deserve urgent attention, but we should not assume that efforts to redress discrimination will entail organizational changes, nor will they guarantee the promotion of student development. Suppose that a school hired more women and minority guidance counselors, offered a special course for minority students to prepare for college board exams, and increased the availability of athletic facilities for women and handicapped students. Each represents an attempt to equalize access to school services, but none would necessarily affect such organizational aspects of the school as its governance structure, relationships among departments, or student-teacher roles in the instructional program. Furthermore, it is conceivable that the guidance counselors, the teacher of the college board course, and those who manage the use of athletic facilities, if not committed to developmental aims, may fail to involve students in activities characterized by variety, excellence, challenge, responsibility. However desirable it is to work toward equal access to school services, changes of this sort should be viewed as necessary for developmental opportunities, but not sufficient to realize them.

The conference group on organizational features selected the grouping of students as the most significant organizational issue to be explored. As a helping profession, education may be unique in the extent to which it offers services to clients organized into groups (compare the highly individualized form of service delivery in medicine, social welfare, law, or counseling). Criticism of the failure to individualize education, along with disputes on tracking, mainstreaming, racial integration, or vouchers indicate the widespread concern with grouping practices. Discussions of grouping often neglect developmental aims, focusing instead

on such issues as school achievement, equity of access, efficiency of school management, students' and parents' rights to choice, or cultural pluralism. Hamilton, Metz, Mergendoller and Mosher show, however, that the research literature permits some well-founded commentary on the relationship between grouping and development.

Disputes on grouping seem to operate on at least two levels. First is the question of authority: to what extent should students be grouped according to the choices of students and their parents, as opposed to criteria (such as diagnostic testing, demographic data) established by professionals? Second is the question of optimal instructional composition: what degree of homogeneity or heterogeneity on any given characteristic is most appropriate for particular developmental aims? Literature exists on each issue, but here we focus mostly on the second.

Developmentalists generally endorse heterogeneous grouping in classes and in schools, but also suggest limits to the degree of heterogeneity in any given group. Stage theories of Kohlberg, Piaget, or Loevinger postulate a dynamic of growth which requires people functioning at lower stages to encounter people at higher stages. The encounter demonstrates inadequacies of lower stage processes and the benefits of higher stages, thus inducing movement in persons functioning at lower stages. Even theories of development not tied to vertical stage progressions, such as Bronfenbrenner's (1979), emphasize the necessity of encountering people of different values, roles, competencies, personalities; they are needed to provide resources for increased differentiation and integration of experience.

On the other hand, encounters among extremely divergent people can inhibit development. People several stages "below" others cannot understand higher stage thinking sufficiently to incorporate it; people incapable of understanding a foreign language will have great difficulty assimilating aspects of an unfamiliar culture. Persons must have a sufficiently clear and stable social identity, often obtained through interaction and identification with people of common experience, in order to risk themselves to seriously entertain divergent perspectives.

The finding that minority students seem to perform better in schools that contain a critical mass of minority students, rather than a very small minority or an overwhelming majority, supports the need for a degree of "homogeneity" as a resource with which to handle divergent experience (Hawley et al, 1981). Such findings tend to be explained by students' reactions to people similar to and different from themselves, but we should also consider teachers' reactions to different concentrations of low achieving minority students. If this group is sufficiently small (e.g., 5%), they tend to be ignored. If it is too large (e.g., 85%), teacher expectations for all can drop to rock bottom. If the proportion falls in the middle range (e.g., 20%-50%), distinct minority needs become apparent, but they can be addressed in terms of high expectations for achievement customarily applied to upper middle class white students.

Discussions of grouping reflect two broad kinds of developmental aims: building technical competencies in subject matter (e.g., reading, math, or electronics), and developing social competence (e.g., role taking, critical thinking, taking responsibility for one's actions). The dominant belief about developing technical competence entrusts the teacher with the main responsibility for providing stimuli appropriately divergent from the student's current level of performance. With this conception of teaching, one that denies students responsibility for assisting one another's development in most school subjects, it is not surprising that teachers concerned mainly with technical competence prefer students grouped homogeneously by ability.

In contrast, many agree that the pursuit of social development requires students to encounter peers from different backgrounds through heterogeneous grouping on social-demographic dimensions of race, sex, socioeconomic status or ethnicity. While the teacher remains a critical learning resource for social development, it is generally recognized that student diversity adds potent material to be processed and integrated. According to this reasoning, the aims of technical competence in school subjects and general social development might be accomplished simultaneously in classes grouped reasonably homogeneously by student ability in the subject, but heterogeneously by social characteristics.

For several reasons, this prescription offers no panacea to the grouping problem. Because of residential segregation, economic inequality, and strong associations between school achievement and socioeconomic status, classes grouped homogeneously by ability are often also socially homogeneous, which inhibits social development. Yet the use of homogeneous ability grouping, even for the purpose of developing technical competence, must be qualified. A case can be made that diversity in student ability, within a workable range, can elevate student mastery more than restricted homogenous classes. A critical mass of high ability students can motivate those of lesser competence and can, through peer teaching, boost both their own achievement and those of classmates. If homogeneous ability grouping is interpreted to include a significant, though workable, range of student competence, in many schools this might also increase social heterogeneity in classrooms and possibly stimulate development in both the technical and social senses. A finely-tuned manipulation of students, based on ability and social characteristics, however, is both practically difficult and potentially dangerous.

The more attention given to precise methods of grouping, whether aimed toward more homogeneity or heterogeneity (on ability, aspiration, or social characteristics), the more we risk dangers of inappropriate classification. Trying to match students with teachers and with one another to represent the optimal range of divergence on several dimensions can escalate the labeling process, with increased risks of elitism, self-fulfilling prophecies, treating people as abstract categories rather than as unique persons. More sensitive attention to grouping must proceed with extreme caution.

Constituent input into the governance of schools was also considered a critical organizational feature, not only for its potential contribution to student development, but as a social entitlement or democratic right. Considerable commentary exists on the desirability of power sharing among parents, students, teachers, and administrators, and some data exists on the developmental effect of student participation in governance. Generally, however, we know very little about the social-demographic conditions that lead to high or low degrees of power sharing and the effect of various forms of power sharing on adolescent development. Research on these issues was proposed.

4. *Program Effects on Development*

The final topic examined deliberate attempts to affect student development through special high school curricula and programs. We intended to review the types and magnitude of effects observed, and to inquire into explanations for such findings. Mosher's paper highlighted several specific programs that showed student gains in moral reasoning, ego development, and other criteria such as formal operational thought or social activism. Discussion about Mosher's paper questioned conceptions of development that dominate intervention studies (especially those of Piaget, Kohlberg, Loevinger) with much attention to the problem of restricted point of view (the exclusion of the perspectives of women, minorities, marginal students; or the exclusion of broader frameworks for construing development). Since these issues have been addressed throughout the volume and in my own previous comments, I wish to emphasize here the problem of reaching generalizations about program effects. Even with Mosher's review, we lack a comprehensive synthesis that aggregates the multitude of studies to answer the question "Under what conditions do certain kinds of programs produce certain forms of development?"

Knowing that a diverse set of programs can influence development, what is known about the relative impact of various ingredients across different programs, such as intake characteristics of students, teacher characteristics, specific program activities (e.g., judging moral dilemmas faced by others versus resolving actual dilemmas faced by oneself)? Until research begins to clarify specific aspects of programs that seem to exert impact, we have no general principles on which to design local programs, but must instead simply copy or imitate programs that seem to have been successful. Would the most successful programs, for example, be distinguished from conventional school experience by criteria mentioned in the above discussion on environments (variety, challenge, responsibility, excellence)? Would conclusions on such issues depend upon the dimension of development to be pursued (e.g., moral, interpersonal, cognitive), or would all dimensions share common antecedents (e.g., active attempts by the student to resolve conflict)?

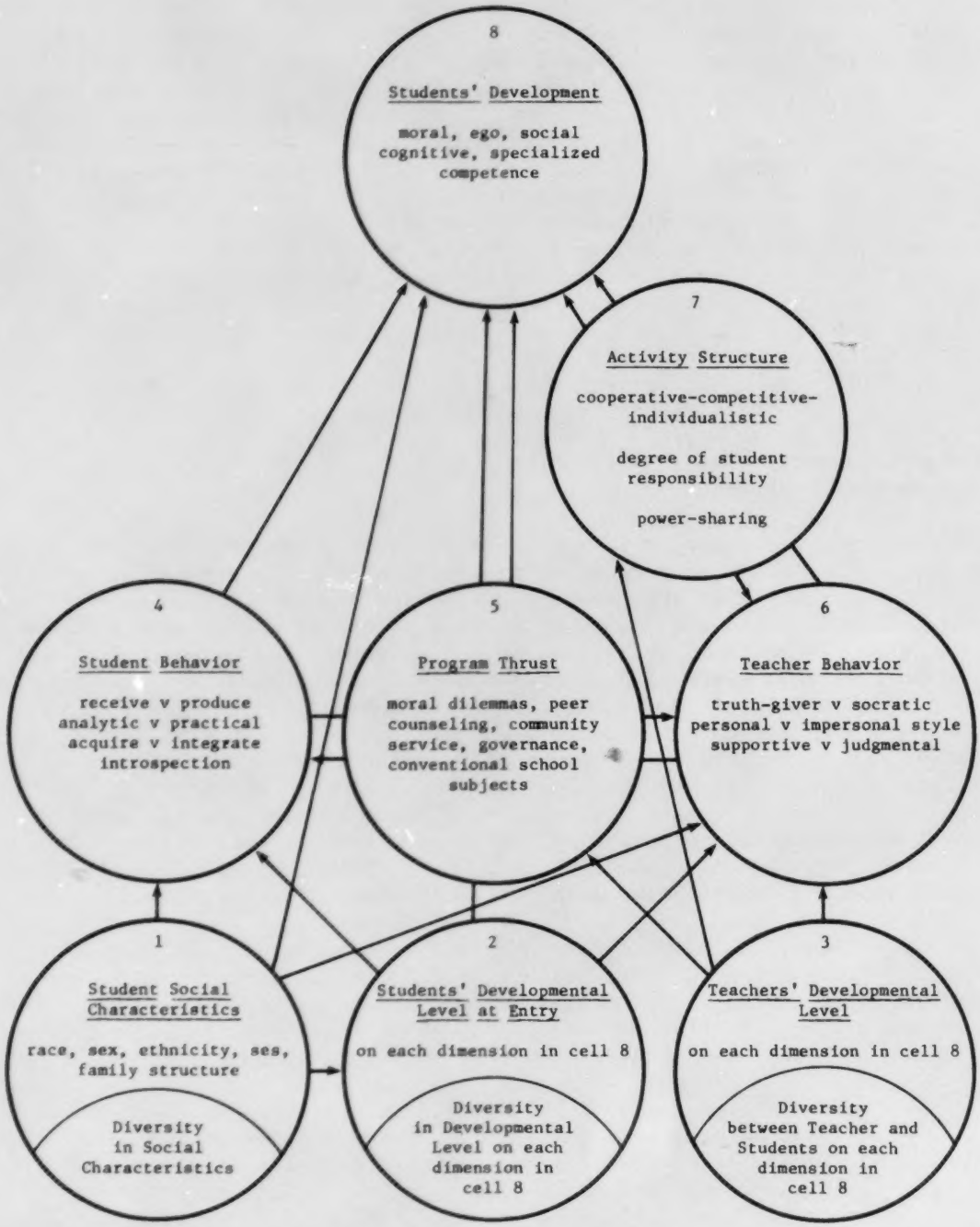
For several reasons, we lack generalizable knowledge on the relationship between specific interventions and development but, as

Moseby observes, first we should recognize the failure of developmental theory itself to specify in theoretical terms why certain forms of treatment or intervention are to be preferred over others. Theory does offer a few postulates: that organisms behave to maintain equilibrium; that perception of dissonance, conflict, contradiction, discrepancy, threatens equilibrium, and also triggers efforts to restore it through integration of the new experience; and that such integration can often be achieved only through adoption of new structures of thought and feeling. But beyond this, developmental theory gives few clues about how to facilitate development in people, and this is widely acknowledged by developmentalists as prominent as Erikson, Piaget, Kohlberg or Loevinger. The absence of theoretically derived treatments leads to countless prescriptions based on common sense, logic, intuition. If determining which treatments seem most effective is largely an empirical issue uninformed by theory, we have little reason to believe that any treatments generally should be more effective than others. Thus, why worry about the relative value of different approaches--try anything you wish, and if it works, count your blessings and stick with it. Such a state of affairs does not stimulate systematic research.

A second problem is that most of the data on program effects comes from evaluation studies whose main objective is to assess the gross effects of particular programs in comparison to control groups, rather than to understand the impact of specific independent variables across programs. Mosher did refer to some investigators' opinions on the importance of having teachers knowledgeable about development and being at high stages themselves, with specific developmental goals for students, voluntary assignment of students, and at least a year's time in the program. Such views may be reasonable, but they have not been tested on a large scale, and they don't arise from developmental theory. Understandably they originate from investigators with experience in particular programs, rather than from large studies of several programs. To advance knowledge on program impact, research must shift from specific program evaluation to designs that seek generalizations across programs.

We miss the kind of research just requested in part because it is tremendously complicated to conduct. It calls for designs that allow analysis of a variety of combinations of students, teachers, aims, interventions. To illustrate research that could illuminate the relationship between programs and student outcomes, consider the path diagram below.

Within each cell I have included dimensions on which the general variable might be assessed (realizing that the dimensions themselves may represent independent variables rather than indices of a general cell variable). We are not concerned here with how various attributes are to be measured, but merely with identifying those that seem important. The cells are not taxonomically clean or independent; they are intended to highlight distinctions that need to be tested. For example, perhaps the student behaviors of production, analysis, and introspection can occur in all programs, and perhaps they contribute more to development than



Path Diagram of Variables Affecting Student Development

student or teacher entry characteristics or any particular program type.

Cell 8 represents the dependent variable or ultimate student outcome and indicates the many dimensions on which this might be evaluated. Independent variables are represented in all the other cells. Cells 1, 2, and 3 each include both a status measure and a measure of diversity among people in a group. Cells 4 and 6 highlight the importance of specific student and teacher behaviors that may be common to several programs. Cell 5 represents the general theme, topic or approach of a program without implying any specific student and teacher behaviors within it. Cell 7 includes general qualities of activities that may be present or absent in all programs, and which may affect student behavior but not necessarily account for all of it.

The diagram proposes ways in which several variables affect development, sometimes directly and sometimes through their effects on one another. Ideally, conceptualizations like these would lead to research that clarifies each variable's relative significance. Efforts to convince educators to adopt programs often imply that program type or thrust is the most critical vehicle for stimulating development ("schools need new programs in moral education, community service, or career development"), but is it conceivable that most of the variance in student development can be accounted for by influences unrelated to program type such as students' social and developmental characteristics, student and teacher behavior and activity structure.

The diagram invites speculation about multivariate causation. It hypothesizes, for example, that students' developmental level at entry affects future development through several routes: by influencing development directly; by influencing student behavior which in turn affects development either directly or through its influence on teacher behavior; by influencing teacher behavior which in turn affects development either directly or through its influence on student behavior.

Translating the diagram into an actual study is complicated by the fact that many of the cells listed here represent several different variables. To puruse path analysis statistically, we must represent each variable discretely, and this could call for different diagrams for each of the final dimensions of development. From a practical standpoint, we are not likely to find a large enough population of educational programs that include sufficient variance on variables suggested to apply statistical path analysis or other multivariate models. Because of difficulties in finding appropriate samples, and because of the lack of guidance from developmental theory in suggesting hypotheses about intervention and outcomes, some might suggest that we abandon the effort to learn in more detail how the "black box" of education programs affects student development.

As Dulit observed, we may need paradigms for thinking about influences on development other than those offered by quantitative science. One alternative is to search for programs or environments which seem to

have exceptionally powerful positive impact on student development, as judged by competent observers, without necessarily measuring many of the subtle variables discussed here. If, according to participant and observer testimony, powerful environments or treatments can be found, they could be studied with some intensity, perhaps in a case study format that examines how variables in our path diagram appear to function in the exceptional programs. A holistic examination of individual contexts in which development is occurring may help to illuminate why it does, especially if we look for commonalties among the successful programs as Conrad and Hedin (1981) did in comparing experiential learning environments with conventional school.

I find two general reasons to continue to press toward a more complicated understanding of developmental dynamics. The first deals with means, the practical problem of accomplishing ends more efficiently. Successful developmental programs may expend unncessary effort, because they have not identified the variables most critical to their success. Perhaps much of student growth is due to a "halo effect" of participating in programs acknowledged to take special interest in students. Perhaps in any subject of instruction a certain form of teacher-student dialogue, in concert with the right developmental mix of students, can accomplish as much development for students as the introduction of special curriculum and materials, new administrative arrangements, extensive training and community relations exercises. Perhaps, as members of one group strongly suggested, teacher characteristics and behavior contribute more to development than anything else. Analyses that attempt to separate critical from tangential program features could improve program efficiency.

A second reason for detailed internal analysis relates to ends, and is illustrated by situations in which observers find outstanding program features but disappointing results in student outcomes. Wehlage and others (1980) observed this in programs that inspired much commitment, effort and imaginative curriculum for marginal students, but did not seem to reduce student alienation. Mosher encountered it when students' experiences in direct government enhanced moral reasoning scores less than did classroom discussion of moral issues. Findings of this sort help to stimulate reformulation of ends. They could lead, as in the above examples, to revisions of concepts of alienation used as dependent variables, or to making a distinction between highly developed political thought versus high level moral thought.

Imagine a multivariate analysis indicating that social diversity among students has virtually no general effect on development, or that it affects different sexes, classes, races differently. Such findings may lead us to drop social diversity as a general prescription for increasing development, but may teach us to ground an endorsement of social diversity in other values, for example, the need to cope peacefully with people different from oneself, regardless of one's development level. The conference's persistent concern with general prescriptions to facilitate development would seem to be enchanced by research that looks closely at attributes

unique to specific programs, attributes on which programs can be compared, and the relationship of these to a variety of developmental ends.

Conclusion

The conference neither aimed toward, nor produced, scholarly consensus or clear guidelines for schools. We had hoped to outline a coherent research agenda, but found the task beyond our reach in two and a half days. We did achieve two important accomplishments: the preparation of perceptive and scholarly initial statements on four critical issues which have received inadequate attention in scholarship on both adolescence and schooling, and the initiation of intensive dialogue among diverse investigators competent to approach these issues. We hope this publication will carry the work of conference participants to other scholars and practitioners with similar concerns.

As the publication goes to press, education in the U.S. faces financial and ideological assaults that make it difficult for secondary schools to concentrate on developmental aims and difficult for researchers to study links between adolescence and schooling. The conference's lack of closure on the problems before us should not be interpreted as a lack of commitment to the responsibility of schools to serve developmental aims, nor as grounds for decreasing the research effort. My own interpretation of participants' reactions is that most came away with invigorated commitment to both causes. We invite readers to share the challenge.

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PROFESSIONAL SKETCHES OF CONFERENCE PARTICIPANTS

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University of Minnesota

My major work has been in the area of family stress due to loss and separation, especially father absence in military, corporate executive and divorced families. Research has been with disaster samples (families of Missing-in-Action as well as Iranian Hostage families) as well as normatively stressed families (divorce, job related absence). More recently, the theoretical work has been expanded to include developmental stresses of loss across the life span.

Published in all major family journals in U.S. and abroad, on editorial boards of most, chair of Research and Theory Section of National Council on Family Relations.

Catherine Chilman
School of Social Welfare
University of Wisconsin-Milwaukee

As Professor in the School of Social Welfare, at the University of Wisconsin-Milwaukee, I teach Family Development, Public Policies and Families, and Research in Child and Family Development. I recently completed a book on contract with the National Institute of Child and Human Development: Adolescent Sexuality in a Changing American Society: Social and Psychological Perspectives. I am now writing a graduate level text book on the topic. Other books include: Growing Up Poor, Your Child: 6-12, Moving into Adolescence, The Child Mental Health Crisis (co-author). I have been a consultant to N.I.E., O.E.O., NIMH, NICHD, HEW-ACVE, the White House Conference on Youth, The American Academy of Obstetricians and Gynecologists, the March of Dimes, many universities and colleges; during the 1960's was Chief of Parent Education for the U.S. Children's Bureau.

Dan Conrad
Center for Youth Development
and Research
University of Minnesota

I both teach adolescents in the Hopkins Public Schools and teach and do research about adolescence at the Center for Youth Development and Research of the University of Minnesota. Currently I am also involved in forming an arts-centered secondary school in conjunction with the Children's Theatre Company and School in Minneapolis.

James Cosse
Consultant for Youth Services
Scarsdale, New York

I am interesting in identifying, developing, and offering those skills and experiences which enhance the normal ego development of adolescents. I consult with communities and school districts about matters pertaining to adolescent development. I teach students and educators; I supervise the work of mental health professionals, and I have a private practice. I have two current special interests which I am persuing with a passion: One is the development of curricula and the training of teachers to teach such curricula which enhance ego development; the other is the use of language to influence or modify behavior.

Everett Dulit
Department of Psychiatry
Albert Einstein College of Medicine

Dr. Dulit is a psychiatrist whose main academic interests have been in the study of (and teaching about) normal and pathological development in adolescence, with a special interest in cognitive development (especially "a la Piaget"), a fairly extensive experience in school consultation in the high school setting, a longstanding interest in the special topic of clinical work with the gifted adolescent, and with a career increasingly shifting away from academic psychiatry into proportionately increasing concentration on his longstanding absorption in the daily work of active psychotherapy with troubled adolescents and their families.

Robert D. Enright
Educational Psychology
University of Wisconsin-Madison

Robert D. Enright received his Ph.D. in 1976 from the University of Minnesota. His degree was in Developmental Education through the Department of Educational Psychology. Since that time he has been a professor at the University of New Orleans and the University of Wisconsin-Madison. Mr. Enright's primary interest areas are in social cognitive education programs and the development of psychometrically sound instruments in the area of social cognition. He has developed a model of classroom intervention based on Sprinthall's ideas in which actual classroom social dilemmas rather than hypothetical stories became the basis of intervention. His scale development has focused on adolescent egocentrism and distributive justice development.

Herbert Exum
Counseling and Guidance
University of Wisconsin-Madison

Herbert Exum is a 1977 graduate of the Department of Educational Psychology at the University of Minnesota. His initial research centered on facilitating ego development in adolescent and young adult women. His primary interests now center on facilitating psychological maturity through curriculum and young adult and

adolescent populations. His work is primarly an extension of the principles of deliberate psychological education in the way of Sprinthall. He is primarily concerned with culturally diverse populations.

Eleanor Farrar
Huron Institute

Eleanor Farrar is Senior Research Associate at The Huron Institute in Cambridge, Massachusetts. For the past several years she has been conducting research on various aspects of public secondary education, most recently completing a four-year NIE-funded study of work experience programs and how they are used by students, teachers, and schools, "The Walls Within: Work, Experience and School Reform." At the present she is one of the principal investigators of A Study of High Schools, a foundation-funded public and private study sponsored by the NASSP and NAIS and chaired by Theodore Sizer.

Carol Gilligan
Harvard Graduate School of Education

Carol Gilligan is Associate Professor of Education at the Harvard Graduate School of Education where she is a member of The Laboratory of Human Development. A developmental psychologist, she has conducted research on moral and ego development, focusing on women's conceptions of self and morality, development from adolescent to adulthood, and people's thinking about real dilemmas of moral conflict and choice. She is currently completing a research project entitled, Contribution of Women's Thought to Moral Development Theory and Research, supported by the National Institute of Education. Her forthcoming book, In a Different Voice: Essays on Psychological Theory and Women's Development, will be published by Harvard University Press.

Stephen F. Hamilton
Department of Human Development
and Family Studies
Cornell University

Stephen F. Hamilton received his M.A.T. and Ed.D. from the Harvard Graduate School of Education. He has been a high school teacher and is currently Assistant Professor in the Department of Human Development and Family Studies, Cornell University. He is engaged in research and development on experiential learning programs for youth and school effectiveness.

Robert Hogan
Department of Psychology
Johns Hopkins University

Dr. Robert Hogan is Professor of Psychology and Social Relations at The Johns Hopkins University. He is principally interested in personality theory, personality measurement, and moral development. He has written a number of papers on adolescent achievement, both educational and practical.

Wayne Jennings
St. Paul Central High School

I am currently principal of Central High School in St. Paul and have been principal at a junior high and an open school in St. Paul. I have been a teacher, a school board member, and founded two alternative schools. I have strong interest in youth development and in the best methods of arranging learning. I consider myself a consumer of education research.

Herbert M. Kliebard
Department of Curriculum and Instruction
Univeristy of Wisconsin-Madison

Herbert M. Kliebard is a professor of Curriculum and Instruction and Educational Policy Studies. His research interests lie in curriculum theory, classroom behavior, history of curriculum, and American secondary education. He is co-author of The Language of the Classroom and has edited Religion and Education in America: A Documentary History as well as Curriculum and Evaluation. Professor Kliebard was awarded a grant by the Center for Dewey Studies to undertake research involving the development of John Dewey's curriculum theory, and he has recently published articles on that subject in Curriculum Inquiry and The Journal of Curriculum Theorizing. His current research concerns the dropout problem in Wisconsin high schools.

Gisela Konopka
University of Minnesota

Gisela Konopka, D.S.W., is Professor Emeritus, University of Minnesota. She is originator, developer, and former director of the Center for Youth Development and Research, at the University of Minnesota, and author of numerous books and articles translated into eleven languages. She has specialized in education, psychology, philosophy, history, social work, corrections, mental health, and administration. She has held several Fulbright scholarships and has taught all over the nation and in foreign countries.

Joan Lipsitz
Center for Early Adolescence

Joan Lipsitz is Director of the Center for Early Adolescence. Her major work interests are expanding the definition of effectiveness to be useful to intermediate, middle and junior high schools; identifying effective after-school programs for young adolescents and increasing awareness about the paucity of research in young adolescents. Her work experience includes NIE research associate; consultant to Ford Foundation, program associate at the Learning Institute of North Carolina and former secondary school teacher.

Alan Lockwood
Department of Curriculum and Instruction
University of Wisconsin-Madison

I am a professor of Curriculum and Instruction at the University of Wisconsin and my major interest is curriculum development in values education. Among my recent writings is a review of research on the effectiveness of Values Clarification and Moral Development interventions.

John R. Mergendoller
Far West Lab

I am currently Project Director for the Ecological Perspectives Project at the Far West Laboratory. My professional interests encompass cognitive (and social-cognitive) development, the phenomenology of moral experience, and the institutional and educational socialization of children.

Mary Haywood Metz
Wisconsin Center for Education Research
University of Wisconsin-Madison

I am a sociologist who studies classroom relationships and the organizational character of schools and school districts. I am currently doing ethnographic research on urban magnet schools and their relations with the wider school system and community.

Renee Marie Montoya
Chicano Education Project

Renee Marie Montoya is a staff person with the Chicano Education Project. She has worked for the past five years to help parents and other policy makers become effective advocates for equal access to education for chicano youngsters. She presently is the Coordinator of the Center for Hispanic School Board Members, an activity with the Chicano Education Project.

Don Moore
Designs for Change

My major interest is in analyzing the organizational and political dynamics in the educational system that create inequitable programs and services for minority, low-income, and handicapped students and in devising and carrying out strategies to eliminate these inequities.

LeBaron C. Moseby, Jr.
Research and Development Center
for Teacher Education
University of Texas at Austin

LeBaron Moseby is currently a Director of the Social Ecology of an Urban School project at the Research and Development Center for Teacher Education. Dr. Moseby has been active in Teacher Education for the past 9 years with primary research interests in ethnicity and adolescence. His present research deals with problems of school discipline with special concern for the problems of minority overrepresentation.

Ralph Mosher
Boston University

Ralph Mosher holds an Ed.D. from Harvard and is professor of education and Coordinator of Programs in Counseling at Boston University. His most recent books include Adolescents' Development and Education and Moral Education: A First Generation of Research and Development.

Fred M. Newmann
Department of Curriculum and Instruction
University of Wisconsin-Madison

For several years, through different strategies, I have been attacking a broad question: In what ways can institutions, especially schools, in a modern culture be shaped so as to enhance "community?" This problem has led to research and development of social studies curriculum, to planning an alternative school, to studies on such topics as alienation in secondary schools, theories of democratic citizenship, human diversity as a problem for schooling and social policy.

Vito Peronne
Center for Teaching and Learning
University of North Dakota

I have taught at all levels, pre-school through graduate education. I have been deeply involved with issues of teacher education--teaching, learning and development--over the past 19 years. Throughout my years at the university, I have remained active in schools and communities. I am an advocate for parent participation in schools, curricular diversity, active learning, use of community resources and educational evaluation that supports high quality teaching and learning.

Christine Sleeter
Wisconsin Center for Education Research
University of Wisconsin-Madison

In addition to working at the Wisconsin Center for Education Research, I am currently a lecturer in the University of Wisconsin Department of Curriculum and Instruction, teaching introduction to elementary education. I taught high school for four years in Seattle and have been working recently with two colleagues on an ethonographic study of a multiracial, mainstreamed junior high. On the basis of that study we are writing a book about schooling in pluralistic contexts.

Norman A. Sprinthall
University of Minnesota

Currently I'm in the Counseling and Student Personnel Psychology Program at Minnesota. One of my major theoretical and research interests has been to broaden the scope of the secondary school curriculum to include psychological maturity as a major and co-equal educational objective. The work originated at Harvard with Ralph Mosher. The most recent description can be found in "Psychology for secondary schools: The saber tooth curriculum revisited?", American Psychologist, 1980, 35(4), 336-347. I'm currently writing a textbook along with Andrew Collins which attempts to synthesize the variety of developmental domains during adolescence with practical applications, Adolescence: A Developmental Perspective for Theory and Practice.

Calvin R. Stone
Wisconsin Center for Education Research
University of Wisconsin-Madison

Calvin Stone is a Specialist at the Wisconsin Center for Education Research. He has taught for a number of years in alternative high school programs. He also developed an alternative high school for dropouts. His empirical research has attempted to synthesize exciting theories about dropout, adolescent development and school climate.

Elliot Turiel
Educational Psychology
Department of Education
University of California-Berkeley

I am presently Professor of Education at the University of California, Berkeley, and have previosuly taught at University of California, Santa Cruz, as well as Harvard and Columbia. My general research interests are in social cognitive development and theories of development. I have done research with children and adolescents on moral judgments; concepts of social organization and convention; concepts of social rules.

Gary Wehlage
Department of Curriculum and Instruction
University of Wisconsin-Madison

Gary Wehlage is a professor of Curriculum and Instruction at the University of Wisconsin-Madison. His research focus has been on the institutional characteristics of schools and how those characteristics shape the lives of students and teachers. He has produced studies of Teacher Corps projects, an elementary school reform program and, most recently, an analysis of school climate factors leading to high school dropout.

Saul Yanofsky
National Institute of Education

The early part of my professional career centered largely around the area of adolescents and secondary schools: I taught at both the junior high and senior high school levels; my dissertation was on adolescent attitudes toward their schools; I participated in a major curriculum development project for secondary school students; and I helped design, operate and/or study several alternative secondary schools. For the past eight years, I've been at NIE, where our program interests have included, but extended far beyond, the area of adolescents and secondary schools.